

ACTION 11: *Limit The Amount Of Impervious Surfaces And Encourage The Use Of Pervious Type Surfaces.*

Hazard Targeted	Flood
Goals Addressed	1
Document Reference, if applicable	Cumberland County Zoning Ordinance, Cumberland County Subdivision Ordinance and the Water Supply Watershed Ordinance.
New, Continuation, Amendment	Completed on February 19, 2008
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Will limit the amount of impervious surface, which would reduce runoff and flooding.
Reduce Overall Vulnerability	Reduce vulnerability to existing and future development.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	Cumberland County Planning Department
Benchmark and Indicator Of Progress	Completed February 19, 2008. Cumberland County Zoning Ordinance allows non-residential uses with a structure or structures exceeding 20,000 square feet of floor area shall permanently surface 75% of parking area with the remaining 25% shall consist of a pervious surface.

ACTION 12: *Develop A Landscape Ordinance That Will Encourage Protection Of Natural Areas Through Design And Provide More Vegetation In Urban Development.*

Hazard Targeted	Flood, Extreme Heat
Goals Addressed	1; 2
Document Reference, if applicable	Cumberland County Zoning Ordinance
New, Continuation, Amendment	Completed on June 20, 2005
Priority	Moderate
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Provide more pervious area for natural drainage and provide reduction of extreme heat.
Reduce Overall Vulnerability	Reduce the vulnerability to localized flooding and extreme heat.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	Cumberland County Planning Department
Benchmark and Indicator Of Progress	Completed on June 20, 2005 with the adoption of Revised Cumberland County Zoning Ordinance. The revised ordinance includes landscaping requirements that applies to non-residential and mix use developments.

ACTION 13: *Develop A Tree Ordinance To Address Clear Cutting, Protection Of Existing Trees And Vegetation.*

Hazard Targeted	Flooding, Extreme Heat
Goals Addressed	1; 2
Document Reference, if applicable	
New, Continuation, Amendment	Deferred (Partial completion)
Priority	Low
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Provide more pervious area for natural drainage and tree canopy for shade and air quality.
Reduce Overall Vulnerability	Reduce the vulnerability to localized flooding and extreme heat.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	Cumberland County Planning Department
Benchmark and Indicator Of Progress	At this time a tree ordinance addressing clear cutting has not been considered. The County landscape requirements encourage the protection of existing trees and vegetation while allows these trees and vegetation to be counted towards meeting the standards. The County Landscape requirements are a part of the Zoning Ordinance.

ACTION 14: *Develop A Reforestation Program To Increase Vegetation Cover In Highly Urbanized Areas And In Denuded Areas In Flood Prone Areas.*

Hazard Targeted	Flood, Extreme Heat
Goals Addressed	1; 2
Document Reference, if applicable	Erosion Pollution Control Act
New, Continuation, Amendment	Deferred
Priority	Low
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Reduce the amount of impervious surface and runoff.
Reduce Overall Vulnerability	Reduce flooding and exposure to extreme heat. In denuded areas the reforestation would reduce amounts of erosion and stabilize the soil from extreme runoff and wind.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	U.S. Forest Service
Benchmark and Indicator Of Progress	The strategy of the County is to protect natural vegetation to enhance air quality, counteract extreme heat in urban areas and reduce sedimentation and pollution of waterways. Denuded areas were to be reforested by the public sector or non-profit organizations. Due to limited resources these efforts have been delayed. The County's focus now is protecting as much existing vegetation as possible and requiring developments to plant additional vegetation. These efforts have been addressed by the adoption of a Landscape Ordinance and the provision of development alternatives that protects vegetation and open space.

ACTION 15: *Develop A Greenway Program And Encourage Low Impact Uses In Those Areas As A Means To Protect Natural Areas Along Rivers, Streams, Creeks, And Drainage Ways.*

Hazard Targeted	Flood
Goals Addressed	1; 2
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Deferred (Partial Completion)
Priority	Moderate
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Provide a buffer from urban encroachment.
Reduce Overall Vulnerability	Reduce flooding and erosion.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	Local Jurisdictions and Cape Fear River Assembly
Benchmark and Indicator Of Progress	At this time a Greenway Plan has been developed inside the urban area of the County where density is the highest. As funds and resources become available extension to the rural area will be valid. Currently the protection of rivers, streams, creeks and drainage ways is accomplished through the Cumberland County Flood Damage Prevention Ordinance that includes small stream standards for those areas with no designation of a Special Flood Hazard Area.

ACTION 16: *Revised Subdivision Ordinance Requiring Additional Access For Emergency Vehicles And To Be Used As An Evacuation Route For Developments Located Near Special Hazard Areas.*

Hazard Targeted	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms and Wildfires)
Goals Addressed	1; 2
Document Reference, if applicable	Cumberland County Subdivision Ordinance
New, Continuation, Amendment	Deferred
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Will provide an additional access for residents, public safety officials and emergency services to those developments located near a natural hazard prone area.
Reduce Overall Vulnerability	Reduce the possibility of a life-threatening situation for residents, public safety and emergency services.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Short-term
Person(s) or Department Responsible	Cumberland County Planning Department
Benchmark and Indicator Of Progress	Currently Cumberland County Subdivision Ordinance does not require an additional access for evacuation route for developments located near special hazard prone areas. The Planning Board reviews the Subdivision Ordinance annually and could consider this action with its annual review.

ACTION 17: *Identify Areas That Are Susceptible To Wildfires And Consider Prescribed Fire (Controlled Burning) Management Tool To Reduce The Impact Of Wildfire Hazards.*

Hazard Targeted	Wildfires
Goals Addressed	1; 2
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Deferred
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Provide a mechanism to limit the amount of damage to those areas susceptible to wildfires.
Reduce Overall Vulnerability	Reduce the amount of woodland that is lost to wildfires and help educate the public on prescribed burning and Firewise Communities.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	NC Forest Service
Benchmark and Indicator Of Progress	Currently the Cumberland County office of Forest Service has developed a draft risk assessment of those areas of Cumberland County that are susceptible to wildfires. This risk assessment is general in nature and for in office use only. The NC Forest Service has completed five Community Wildfire Protection Plans for certain areas of Cumberland County.

ACTION 18: Continue The Mutual Aid Agreement Between All Electrical Providers.

Hazard Targeted	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms, Wildfires, Drought, Extreme Heat and Earthquakes)
Goals Addressed	1; 2
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Completed
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Provide assistance in the restoration of electrical power.
Reduce Overall Vulnerability	Help reduce the amount of time to restore electrical power to those whom loss power during a hazard event.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	On-going
Person(s) or Department Responsible	PWC, South River EMC, Lumbee River EMC, and Progress Energy
Benchmark and Indicator Of Progress	The mutual aid agreement currently exists with all of the electrical providers in Cumberland County.

ACTION 19: Continue To Protect Wetlands And Environmental Sensitive Corridors.

Hazard Targeted	Flood
Goals Addressed	1; 2
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Completed
Priority	Moderate
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Continue to prohibit urban encroachment from these areas.
Reduce Overall Vulnerability	This will allow the wetlands and corridors to function as they were intended to function.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	Corp of Engineers
Benchmark and Indicator Of Progress	The Corp of Engineers is responsible for the mapping and enforcements of the wetland regulations within Cumberland County and its municipalities.

ACTION 20: Develop And Maintain A Data Base And Provide A Mechanism For Monitoring And Evaluating Mitigation Efforts. The Data Base Would Contain Damage Assessment; Type Of Hazard; When And Where It Occurred; Death Or Injury; And Actual Replacement Cost.

Hazard Targeted	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms, Wildfires, Drought, Extreme Heat and Earthquakes)
Goals Addressed	1; 2
Document Reference, if applicable	Not Applicable
New, Continuation, Amendment	Completed
Priority	High
Funding	Not Applicable

How the Action Will:

Mitigate the Hazard	Provide vital information to the governing boards, staff, agencies, and citizens concerning type of hazards; their effect; cost; and will provide excellent source of information to the staff for future updates to the Hazard Mitigation Plan.
Reduce Overall Vulnerability	This information will provide pertinent information on building standards, location and types of development, and the potential frequency the County may expect these natural hazards to occur, and serve as a resource for educational purposes to the general public.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Short-term
Person(s) or Department Responsible	Cumberland County Emergency Services
Benchmark and Indicator Of Progress	This information is currently reported to North Carolina Emergency Management from Cumberland County Emergency Management and NC Emergency Management maintains the database of type of hazard; damage assessment; when and where it occurred; death or injury; and replacement cost.

ACTION 21: *Encourage The Maintenance Of Trees Along Power Lines.*

Hazard Targeted	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms and Winter Storms)
Goals Addressed	1; 2
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Completed
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Lessen the impact to citizens when loss of power occurs during a natural hazard.
Reduce Overall Vulnerability	Decrease loss of electrical power during a hazard event.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	On-going
Person(s) or Department Responsible	PWC, South River EMC, Lumbee River EMC, and Progress Energy
Benchmark and Indicator Of Progress	The electrical companies provide this maintenance for their power lines.

ACTION 22: Encourage All Rest Homes To Have A Reciprocal Agreement.

Hazard Targeted	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms, Wildfires, Drought, Extreme Heat and Earthquakes)
Goals Addressed	2
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Completed
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Remove population from life threatening situations and provide them shelter during the recovery process.
Reduce Overall Vulnerability	Reduce loss of life and personal belonging.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	On-going
Person(s) or Department Responsible	Cumberland County Social Services Department
Benchmark and Indicator Of Progress	The reciprocal agreement currently exists with all the rest homes located in Cumberland County. The agreement is handled through Cumberland County Emergency Services.

ACTION 23: *Provide A Better Multilingual Awareness Program Concerning Types Of Hazards, Their Effects, Warning Signs, What Action To Take And Location Of Emergency Shelters.*

Hazard Targeted	Multi-Hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms, Wildfires, Drought, Extreme Heat and Earthquakes)
Goals Addressed	3
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Continuation
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Help educate those individuals that are multilingual about the types of natural hazards, their effects, warning signs, and what action to take to ensure their safety in the event of a natural hazard.
Reduce Overall Vulnerability	The development of educational and outreach programs would minimize losses and inform multilingual citizens of the natural hazards that are likely to occur within Cumberland County.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Short-term
Person(s) or Department Responsible	Cumberland County Emergency Services
Benchmark and Indicator Of Progress	Currently multilingual information concerning awareness about hazards is available through local, state and federal websites. Cumberland County Emergency Services website offers a link to multilingual information on the different hazards and preparation for those hazards.

ACTION 24: Partner With Higher Education Institutions To Participate In The Education Of Citizens About Natural Hazards.

Hazard Targeted	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms, Wildfires, Drought, Extreme Heat and Earthquakes)
Goals Addressed	3
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Deferred
Priority	Moderate
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	This would increase the outreach of education awareness of natural hazards.
Reduce Overall Vulnerability	This partnership would increase the awareness of natural hazards.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Long-term
Person(s) or Department Responsible	Cumberland County Emergency Services
Benchmark and Indicator Of Progress	Develop in conjunction with the institutions of higher education a program geared towards education the public about the various natural hazards and ways to protect life and property. This will be done through developing flyers, public service announcements and various other media. All activities will be created in Spanish and English.

ACTION 25: *Develop A Program To Train Volunteers To Assist The Vulnerable Population During A Hazard.*

Hazard Targeted	Multi-Hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms, Wildfires, Drought, Extreme Heat and Earthquakes)
Goals Addressed	1; 2
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Completed
Priority	High
Funding	Not applicable

How the Action Will:

Mitigate the Hazard	Provide assistance to public safety officials in the event of a hazard to remove the vulnerable population from a life-threatening situation.
Reduce Overall Vulnerability	Lessen the possibility of a life-threatening situation for the vulnerable population.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Short-term
Person(s) or Department Responsible	Cumberland County Social Services Department
Benchmark and Indicator Of Progress	This program exists through coordination of the fire, police and emergency services entities.

ACTION 26: *Improve Distribution Of Hazard Awareness Materials To Citizens Through Website, Schools And Special Events.*

Hazard Targeted	Multi-hazard (Flooding, Hurricanes, Tornadoes, Thunderstorms, Winter Storms, Wildfires, Drought, Extreme Heat and Earthquakes)
Goals Addressed	3
Document Reference, if applicable	Not applicable
New, Continuation, Amendment	Continuation
Priority	High
Funding	Not Applicable

How the Action Will:

Mitigate the Hazard	Educate and improve awareness of the citizens of Cumberland County about the natural hazards.
Reduce Overall Vulnerability	Improve citizen knowledge of natural hazards that affect Cumberland County and minimize future losses.

Will the Action Be:

Cost Effective	Yes
Environmentally Sound	Yes
Technically Feasible	Yes

On-going, Short-term, Long-term Implementation	Short-term
Person(s) or Department Responsible	Cumberland County Emergency Services
Benchmark and Indicator Of Progress	This action is being accomplished through local media, fire, police and Cumberland County Emergency Services Department. The Cumberland County Emergency Services website includes all the types of hazards that affect Cumberland County and its municipalities and how to prepare for them. It is recommended that a link to this website be placed on all of Cumberland County's jurisdictions websites.

IMPLEMENTATION

Plan implementation will start from the time that the Updated Plan is adopted. Each County Department will be responsible for pursuing the development of policies, programs, ordinances, amendments, and regulations as they are assigned by the actions listed above. Planning staff will prepare these planning documents, ensuring that the goals, objectives and strategies of these planning documents would be consistent with the Hazard Mitigation Plan and would not increase the hazard vulnerability or decrease the hazard capability of the Unincorporated Area. The Cumberland County Joint Planning Board would receive these documents for review and approval (This Board is part of the Cumberland County Hazard Mitigation Steering Committee). These review comments are forwarded to the Cumberland County Board of Commissioners for consideration prior to their review and approval of these planning documents. The public will have an opportunity to provide input on these planning documents at public hearings held before these entities. It will be the responsibility of a County Manager to ensure that these actions are carried out within the allocated time frame.

MONITORING, EVALUATING, AND REPORTING PROGRESS

Periodic monitoring and reporting of the Unincorporated Area Hazard Mitigation Plan of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update is required to ensure that the goals and objectives for Cumberland County are kept current and that local mitigation efforts are being carried out. The monitoring and reporting is to supplement the Plan within the five-year cycle. The Cumberland County Emergency Services Department will act as the contact and clearing house for relevant information.

The Plan shall be reviewed annually, unless a situation occurs making it necessary to review sooner (e.g. natural disasters, new FEMA maps—see Revisions and Updates). Cumberland County shall request that the Cumberland County Joint Planning Board include this annual review in the Board's Work Program. The review will be coordinated with The Cumberland County Emergency Management Office. Then the report will be forwarded to the County Board of Commissioners for review and adoption. The public will be given an opportunity to attend and provide input at public hearings held before the Cumberland County Joint Planning Board and the Cumberland County Board of Commissioners.

The annual report will include the following:

1. An evaluation of the effectiveness and appropriateness of the mitigation actions proposed in the Plan Update.
2. A list of problems that have occurred in the implementation process.
3. Changes in Cumberland County's priorities.
4. Recommendations for changes, revisions, or amendments to the Plan Update.

The following questions will be helpful to Cumberland County in assessing their Hazard Mitigation Plan: (1) Do the goals and objectives address current and expected conditions; (2) Has the nature or magnitude of risks changed; (3) Are the current resources appropriate for implementing the Plan Update; (4) Are there implementation problems, such as technical, political, legal or coordination issues with other agencies/departments; (5) Have the outcomes occurred as expected; and (6) Did the agencies/departments and other partners participate in the Plan Update and planning process as proposed.

REVISIONS AND UPDATES

As updates occur, the date, reason and responsible party should be noted. Updates or revisions that affect the Plan Update as a whole and impact any other jurisdiction(s) will require the approval of the jurisdiction(s) governing body.

At the end of every five-year cycle, the Hazard Mitigation Technical Committee will submit the hazard profile, vulnerability assessment and local capability assessment updates or revisions to FEMA and NCDEM for review. Increased development, increased exposure to certain hazards, the development of new mitigation capabilities or techniques and changes to Federal or State legislation are examples of changes that may affect the condition of the Plan. The Cumberland County Joint Planning Board will review the updated Plan and forward its recommendation to the Cumberland County Board of Commissioners for consideration and adoption. Citizens will be given the opportunity to give input at public hearings held before these entities. Copies of any revision, amendment or update to the Plan must be filed with the Cumberland County Clerk and Cumberland County Emergency Services Department and available for the public to review.

Resolution

WHEREAS, Cumberland County desires to remain eligible for the State and Federal disaster relief funds in the event of a declared disaster in the Unincorporated portion of Cumberland County; and

WHEREAS, the Cumberland County Board of Commissioners recognizes the value of having a Plan in place for identifying, prioritizing, and mitigating potential and real hazards that could affect the Unincorporated Area of Cumberland County.

WHEREAS, the Cumberland County Joint Planning Board Staff has prepared the Unincorporated Area Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update and have revised the Plan as suggested by the North Carolina Division of Emergency Management after its submittal to all appropriate government entities for review and comments; and

WHEREAS, the North Carolina Division of Emergency Management has endorsed the proposed Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

NOW, THEREFORE, BE IT RESOLVED by the Commissioners of Cumberland County that it adopts the Unincorporated Area Hazard Mitigation Plan as part of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

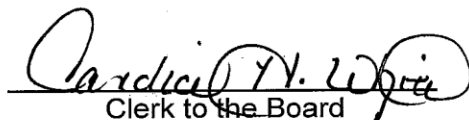
BE IT FURTHER RESOLVED that the Commissioners resolve to annually review the Plan and make revisions to all sections regarding the Unincorporated Area in the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update when new data and information becomes available, as mitigation measures are achieved, and as mitigation strategies evolve; and


FURTHER, that Cumberland County may update and revise the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update as it relates to any Unincorporated Area but does not affect any other jurisdiction. If any revision, update or amendment involves another jurisdiction, the updates and revisions must be approved by the governing body of the affected jurisdiction. Copies of any revision, amendment or update to the Plan by Cumberland County must be filed with the County Clerk, the Cumberland County Emergency Services Department, and added to the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update; and

FURTHER, that administrative changes, wording corrections, the hazard analysis, and vulnerability assessment or other such portions of the Unincorporated Area Hazard Mitigation Plan of the Cumberland County Multi-Jurisdictional Hazard Mitigation Plan Update, do not require additional action by the County Board of Commissioners.

Adopted 19th day of September, 2011

Attest:


Clerk to the Board


Chair, Cumberland County Board of Commissioners

VULNERABILITY ASSESSMENT

Cumberland County's Unincorporated Area Vulnerability Assessment is based on current data in the County's existing data base, the County's GIS data, past records, and other local, State and Federal agencies. This data material addresses both existing and potential future conditions. The types of hazards and the areas they impact, relative to the Unincorporated Area, are delineated in **Table A1: Hazard Identification and Analysis** and **Table A2: Summary of Hazard Vulnerability by Jurisdiction** located in Appendix A - Hazard Profile.

As mentioned previously in the Identifying and Profiling Hazards Section above, and the Vulnerability Assessment Section of the overall County, the Unincorporated Area has experienced the same hazard events as the entire County: hurricanes, tornadoes, drought, thunderstorms, hailstorms, severe winter storms and extreme heat. The impact that these hazards may have on development, infrastructure, and critical facilities is outlined in **Table 5 - Unincorporated Area Private Buildings Vulnerability Assessment**. According to the data gathered, the hazards listed above could potentially impact 29,946 single-family homes valued at \$7,054,559,150 with 71,407 persons. The impact on multi-family development is approximately 747 buildings valued at \$216,624,916 and 13,290 persons. The commercial impact could be 815 buildings with assessed values of \$582,353,774 and 40,866 persons; while industrial impact could involve 180 buildings valued at \$498,541,770 and 16,344 persons. Other private buildings vulnerable include 353 structures valued at \$267,217,176 impacting 468 persons. The total potential impact on private development from a natural hazard in the Unincorporated Area of Cumberland County totals 32,041 structures valued at \$8,619,296,786 and 142,375 persons.

The base data included the identification and inventorying public buildings and critical facilities as shown in **Table 6 - Unincorporated Area Public Buildings and Critical Facilities Vulnerability Assessment**. The critical facilities identified are listed in Appendix B – Critical Facilities Ranking. Designated public buildings and critical facilities include schools, fire stations, police stations, infrastructure, government offices, and hazardous materials facilities, hospitals (including rest homes), sewage treatment facilities, water treatment facilities, hospitals, emergency shelter, and public housing as shown on **Map 6 - Unincorporated Area Critical Facilities/Structures Location**. There are 70 schools valued at \$598,084,814 impacting 18,225 persons; 17 volunteer fire stations valued \$24,456,236 that impacts 235 persons; one police station valued at \$2,671,976 impacting 50 persons; one sewage treatment facility valued at \$30,000,000 impacting 15 persons; 34 sewage pump stations valued at \$13,600,000; nine rest homes valued at \$10,095,046 impacting 980 persons; 30 hazardous materials facilities valued at \$199,213,572 impacting 3,641 persons; two emergency shelters valued at \$72,460,878 impacting 900 persons; 18 public housing structures valued at \$9,183,316 impacting 244 persons; 17 governmental offices valued at \$16,753,852 impacting 48 persons. Critical infrastructure includes 2,023,324 linear feet of water lines valued at \$182,099,160; 1,149,775 linear feet of sewer lines valued at \$172,466,250; 6,785,812 linear feet of roads valued at \$1,282,518,468; 157 bridges valued at \$415,400,000; and 38 dams valued at \$77,000,000. In total there are 199 buildings valued at \$982,519,690 and critical facilities valued at \$2,129,483,878 impacting 24,338 persons vulnerable.

Summarizing the total potential impact on private and public buildings and critical facilities vulnerable to a natural hazard in the Unincorporated Area shows that there are 32,240 private and public structures and critical facilities valued at \$11,731,300,354 impacting 166,713 persons.

Wildfires potential depends on the type and characteristics of surface fuel, weather conditions, recent climate conditions, topography, and fire behavior. The intensity and the rate which fires spread is directly related to wind speed, temperature, and humidity. Climatic conditions such as long term drought and topography play a major role in the number and intensity of wildfires. All of the Unincorporated Area of the County is susceptible due to the vegetative cover, forestland, tree farming, and traditional farming operations in the sparsely populated areas.

Approximately 28,297 acres of land are located within the designated Special Flood Hazard Area as defined in this document. Data and a map showing the vulnerable facilities and structures are in **Table 7 - Unincorporated Area Private Buildings Flood Vulnerability Assessment**, **Table 8 - Unincorporated Area Public Buildings and Critical Facilities Flood Vulnerability Data**, and in **Map 7 - Unincorporated Area Facilities \Structures Within Flood Prone Areas**. Private buildings located in the Special Flood Hazard Area consist of 1,071 single-family residential units valued at \$296,541,672 impacting 2,838 persons; 61 multi-family structures valued at \$9,335,446 impacting 2,096 persons; 75 commercial buildings valued at \$40,384,992 impacting 11,610 persons; and 58 industrial structures valued at \$100,169,536 impacting 5,856. In total, there are 1,284 private buildings valued at \$456,447,299 impacting 22,424 persons are located in the potential Special Flood Hazard Area.

Public buildings and critical facilities located in the Special Flood Hazard Area include one sewage treatment facility valued at \$30,000,000 impacting 15 persons; three sewage pump stations valued at \$1,200,000; one fire stations valued \$2,542,147 that impacts 20 persons; 8 governmental offices valued at \$4,234,798 impacting 23 persons; 462 linear feet of water lines valued at \$41,580; 90,586 linear feet of sewer lines valued at \$13,587,900; 125,105 linear feet of roads valued at \$23,644,845; 38 bridges valued at \$77,800,000; and eight dams valued at \$20,500,000. In total there are 13 buildings valued at \$37,976,945 and infrastructure valued at \$135,574,325 impacting 58 persons.

One structure within the unincorporated area of the county has been classified as repetitive loss properties for flooding. The residential structure is located off of Marsh Road along the Cape Fear River. The amount of repetitive loss was \$17,864.

A summary of the private and public buildings and critical facilities located in the Special Flood Hazard Area includes 1,297 buildings and critical facilities valued at \$629,998,569 impacting 22,482 persons. Some buildings are included in the Flood Vulnerability Assessment, if the parcel of land the buildings is on intersects the Flood Area, even though these buildings are not within the Special Flood Hazard Area.

Vulnerable Populations

Special populations are vulnerable to natural hazards due to the lack of resources or control over certain variables necessary for recovery. These special populations include the elderly (persons over 75 year old), the disabled, non-English speaking persons, the institutionalized, households without telephones and vehicles, those below the poverty level, those living in high hazard areas, those living in certain mobile homes, and renters.

According to the General Demographic Characteristics of the 2000 Census, there are 2,957 persons over 75 years of age, 189 institutionalized persons, 3,450 person that speaks English less than “very well”, 24,988 individuals with disabilities, 2,621 households with no access to a vehicle, 1,169 households without a telephone, 3,251 families below the poverty level, 11,838 families live in a mobile home, and 12,724 renter occupied units. Since the 2010 Census data was not available during the preparation of this document, we have kept the Census 2000 data in the document. If this data comes available during the review process, we will update the final document with the 2010 data.

Development Trends and Projections

Development trends include the direction of growth, current zoning and the land use plan. The unincorporated portion of the county is growing toward the southwest and the north. The southwestern growth direction has been the predominant direction of growth over the years. This may be altered do to recent improvements in the infrastructure in other parts of the County. The Fayetteville Outer Loop is was completed in June 2005 from Interstate 95 to Ramsey Street. The next phase from Bragg Boulevard to Murchison Road is schedule to be completed in 2015. This project opens the northern portion of the County up for development since sewer services is available in the general area. This project also impacts the eastern portion of the County by making it accessible to the Reservation, downtown

Fayetteville and the shopping areas in and around Cross Creek Mall. Many areas in the eastern part of the County have available public water and sewer. The Towns of Wade Falcon and Godwin as well as the Eastover Community have public water and sewer provided by the Town or by the Eastover Sanitary District (ESD). The Town of Stedman has sewer system and contracts with the Fayetteville Public Works Commission to maintain the system and treat the sewer. These services coupled with the access provided by the Outer Loop and a trend toward the desirability of suburban living provides fertile ground for development in these areas. The greatest short term influence on growth in the County is BRAC which is relocating over 40,000 troops and their families, support personnel, civilian employees and others into the Region.

The unincorporated portion of the County is completely zoned. The zoning districts include agricultural; residential (suburban - two or less units per acre, low - greater than two but less than six unit per acre, medium - greater than six but less than 15 units per acre and high - greater than 15 units per acre.), office and institutional, commercial, manufacturing, and conservancy as shown on **Map 8 - Unincorporated Area Current Zoning Map**. Statistics shows that approximately 207,309 acres is zoned agricultural (A1 & A1A) and 37,547 acres zoned residential. A breakdown of these residential classifications shows that approximately 6,280 acres of suburban density (RR, R20, R30, R30A, R40, and R40A), 25,364 acres of low density (PND, R10, R7.5 and R15), 5,903 acres of medium density (R6, R6A, and R5A), 38 acres of high density (R5) and 112 acres for Mixed Use Development (MXD). Further zoning statistics shows that there are 66 acres of office and institutional zoning (O&I), 3,289 acres of commercial zoning (CP, C3, C2P, C1P, and HSP), 9,225 acres of manufacturing (MP, M2, and M1), and 9,519 acres of conservation zoning (CD).

The proposed 2030 Growth Strategy Map for the unincorporated area is shown on **Map 9 - Unincorporated Area Land Use Plan Map**. This map indicates the community's vision for the future use of land. According to the Plan approximately 155,515 acres are designated for rural, 38,785 acres for conservation area, 41,149 acres as urban area; 39,299 as urban fringe, and 21,891 acres Community Growth Area.

Projections for private buildings for the Unincorporated Area for 2025 shows that there will be 36,327 single family dwellings, valued at \$8,557,706,017 impacting 86,622 persons, 906 multi-family units valued at \$262,782,168 impacting 16,122 persons; 989 commercial buildings valued at \$706,438,530 impacting 49,574; 218 industrial structures valued at \$604,768,323 impacting 19,826 persons; and 428 other buildings valued at \$324,154,350 impacting 568 persons. In total, the number of private buildings in the Unincorporated Area subject to a natural hazard in 2025 is projected to be 38,868 buildings with an estimated value of \$10,455,849,387 impacting 172,711 persons (See Appendix C-Methodology for projection method)

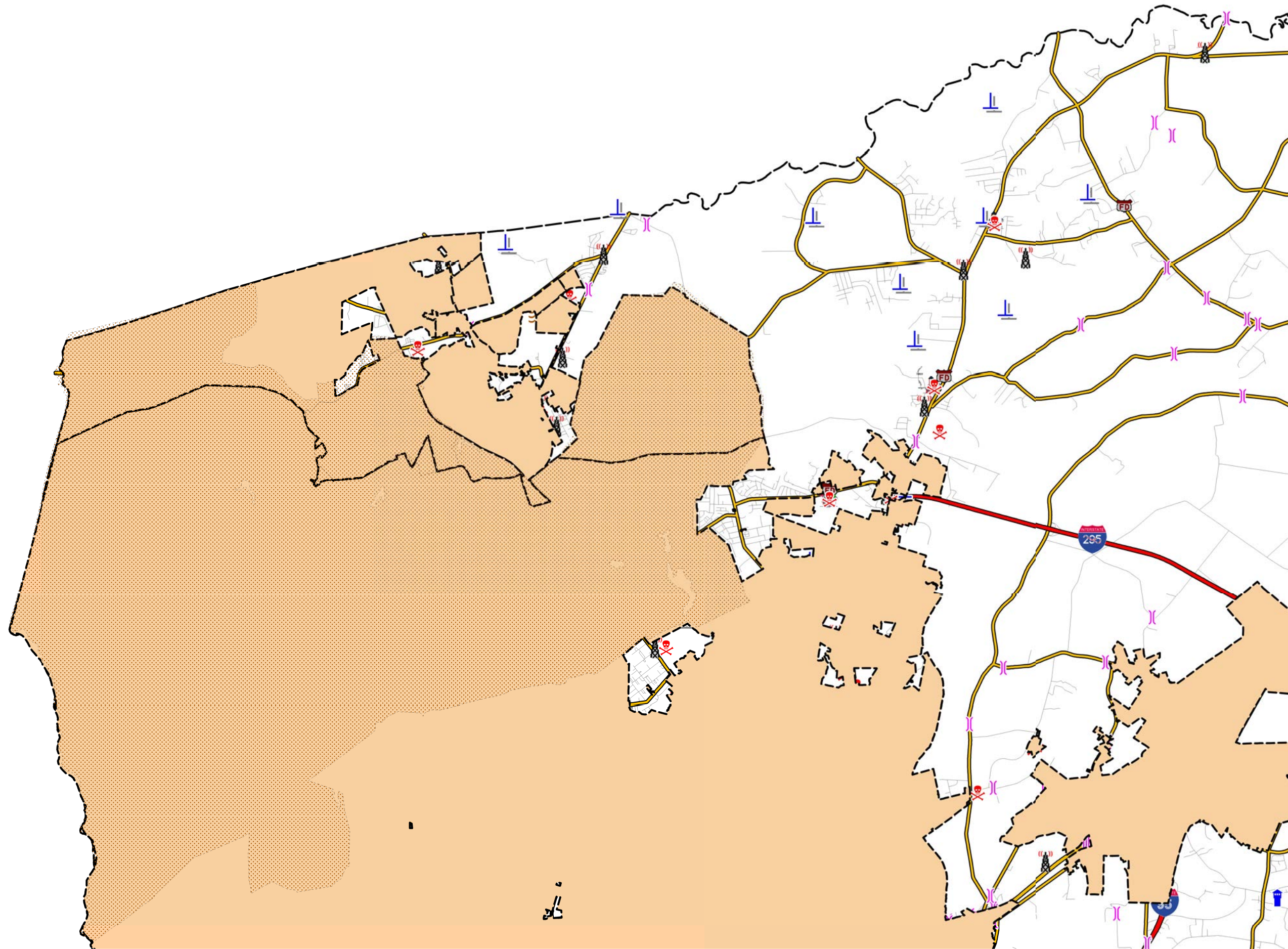
The number of public buildings and critical facilities projected for 2025 vulnerable include 85 schools valued at \$725,521,454 impacting 22,108 persons; 21 fire stations valued \$29,667,237 that impacts 285 persons; one police station valued at \$3,241,306 impacting 61 persons; one sewage treatment facility valued at \$36,392,236 impacting 18 persons; 41 sewage pump stations valued at \$16,497,814; 11 rest homes valued at \$12,246,043 impacting 1.189 persons; 36 hazardous materials facilities valued at \$241,660,910 impacting 4,417 persons; two emergency shelters valued at \$87,900,445 impacting 1,092 persons; 22 public housing structures valued at \$11,140,047 impacting 296 persons; 21 governmental offices valued at \$20,323,671 impacting 58 persons. Critical infrastructure included 2,454,443 linear feet of water lines valued at \$220,899,853; 1,394,763 linear feet of sewer lines valued at \$209,214,415; 8,231,696 linear feet of roads valued at \$1,555,790,486; 190 bridges valued at \$503,911,159; and 46 dams valued at \$93,406,739. In total there are 242 buildings valued at \$1,191,869,610 and critical facilities valued at \$2,583,222,652 impacting 29,524 persons vulnerable.

In summary, there is projected in 2025 to be 39,111 buildings and critical facilities valued at \$14,230,941,650 impacting 202,235 persons vulnerable to natural hazards.

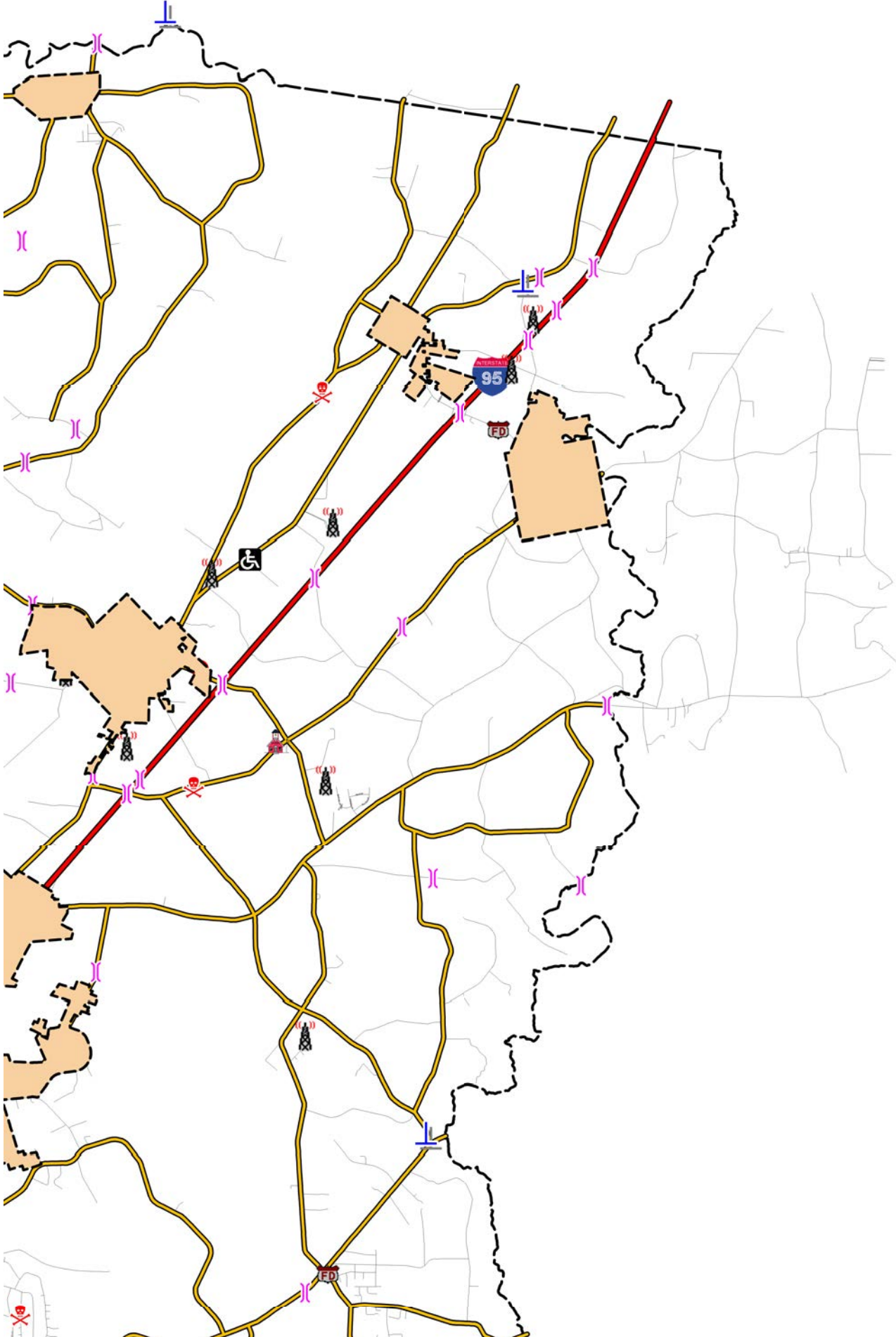
The number of projected number of private buildings in the Special Flood Hazard Area in 2025 is 1,299 single family dwellings valued at \$359,727,149 impacting 3,443 persons; 74 multi-family units valued at \$11,324,592 impacting 2,543 persons; 91 commercial structures valued at \$48,990,005 impacting 14,084 persons; 70 industrial structures valued at \$121,513,113 impacting 7,104 persons. In summary, it is projected that in 2025 there will be 1,558 private buildings valued at \$553,704,592 impacting 27,202 persons subject to flooding in Special Flood Hazard Areas, if no actions are taken. The implementation of mitigation actions in this document should reduce the number of these at risk properties.

In 2025, it is projected to be one sewage treatment plant valued at \$36,392,236 impacting 18 persons; three sewage pump stations valued at \$1,200,000; one fire station valued at \$3,083,814 impacting 24 persons; 10 government offices valued at \$5,137,126 impacting 28 persons; 560 linear feet of water lines valued at \$50,440; 109,888 linear feet of sewer lines valued at \$16,483,135; 151,762 linear feet of roads valued at \$28,682,959; 46 bridges valued at \$94,377,198; and 10 dams valued at \$24,868,028 located in the Special Flood Hazard Area. The total 2025 projected number of buildings and critical facilities located in the Special Flood Hazard Area is 16 buildings valued at \$46,068,865 impacting 70 persons and infrastructure valued at \$164,461,760.

In summary, the total projected number of private and public buildings and critical facilities in the Special Flood Hazard Area in 2025 is 1,573 buildings and infrastructure valued at \$764,235,217 impacting 27,272 persons.

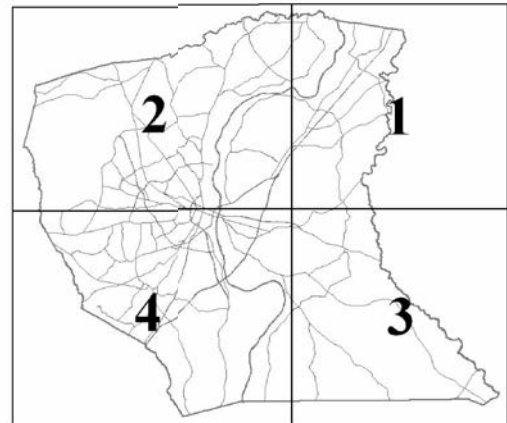


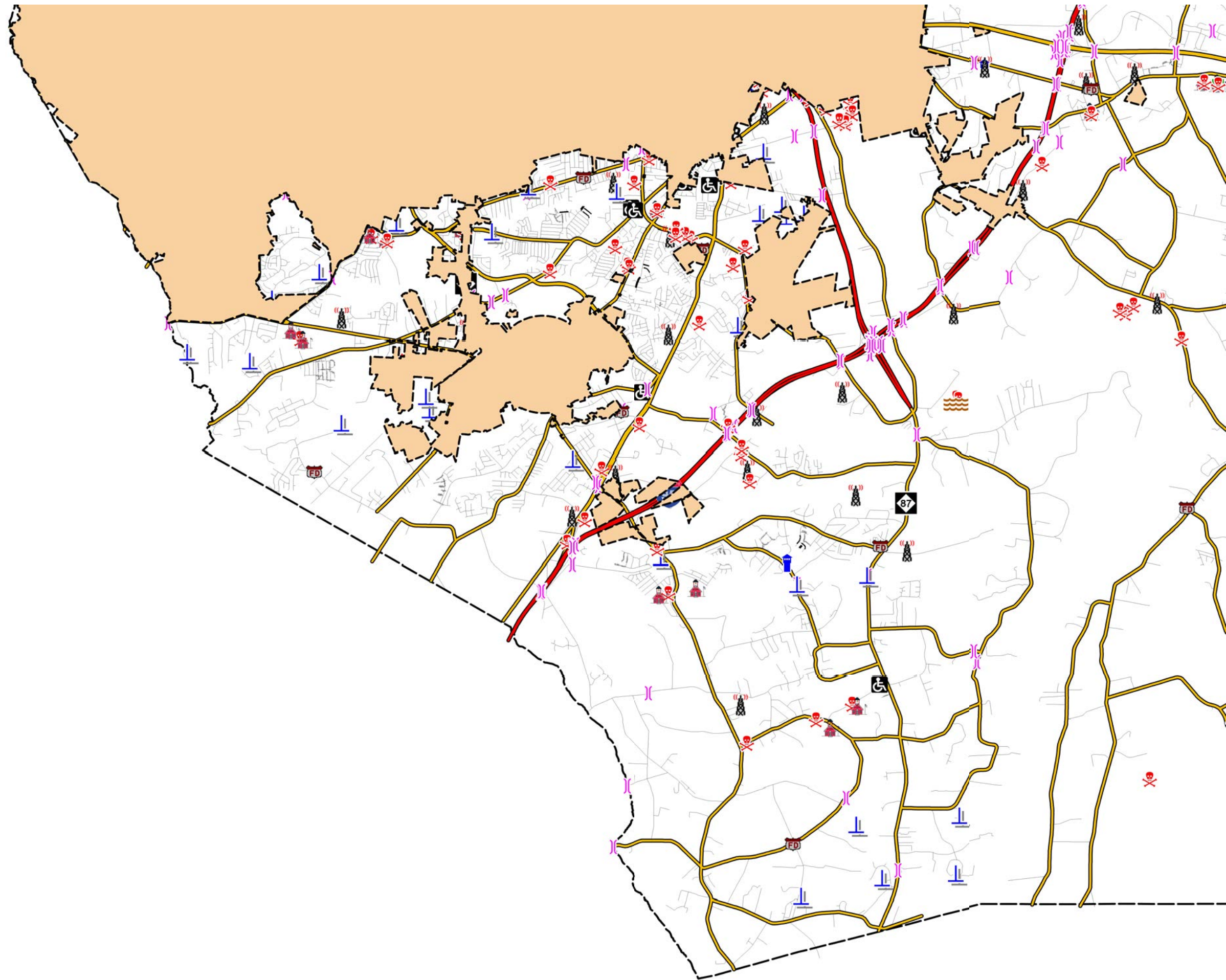
Map 6
Unincorporated
Area
Critical Facilities

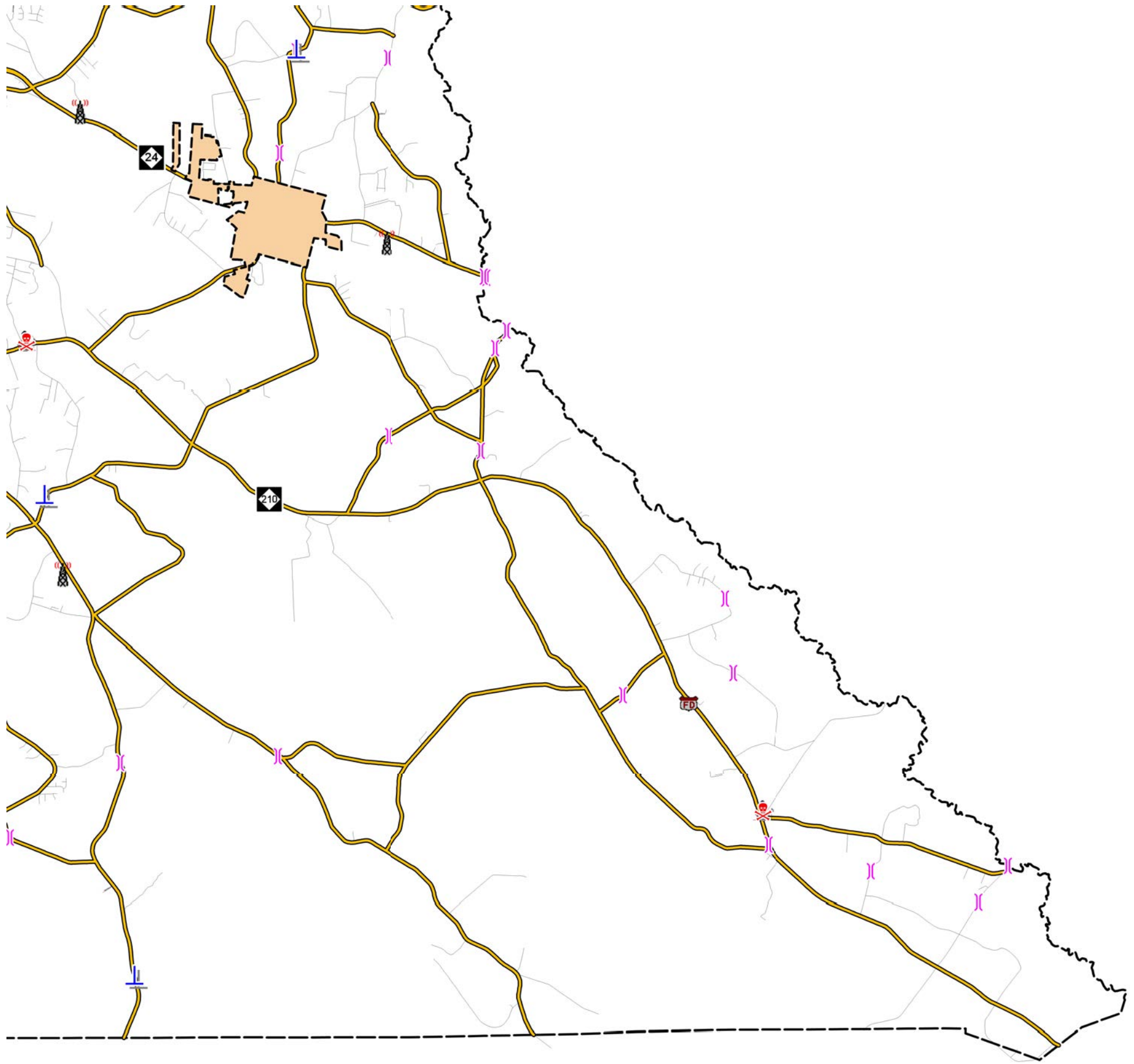


Legend



- Cell Tower
- Hazardous Materials
- Water Tower
- Bridge
- Emergency Shelter
- Fire Department
- Public School
- Municipal Boundary
- Streams-Rivers
- Lakes
- Dams
- Resthome
- Ft. Bragg - Pope AFB
- Sewage Treatment Facility

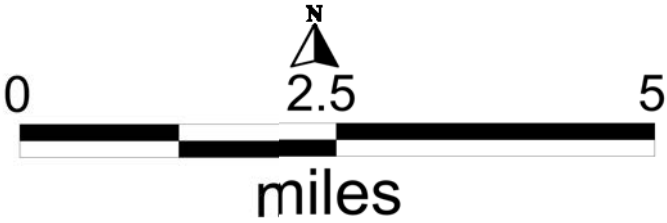


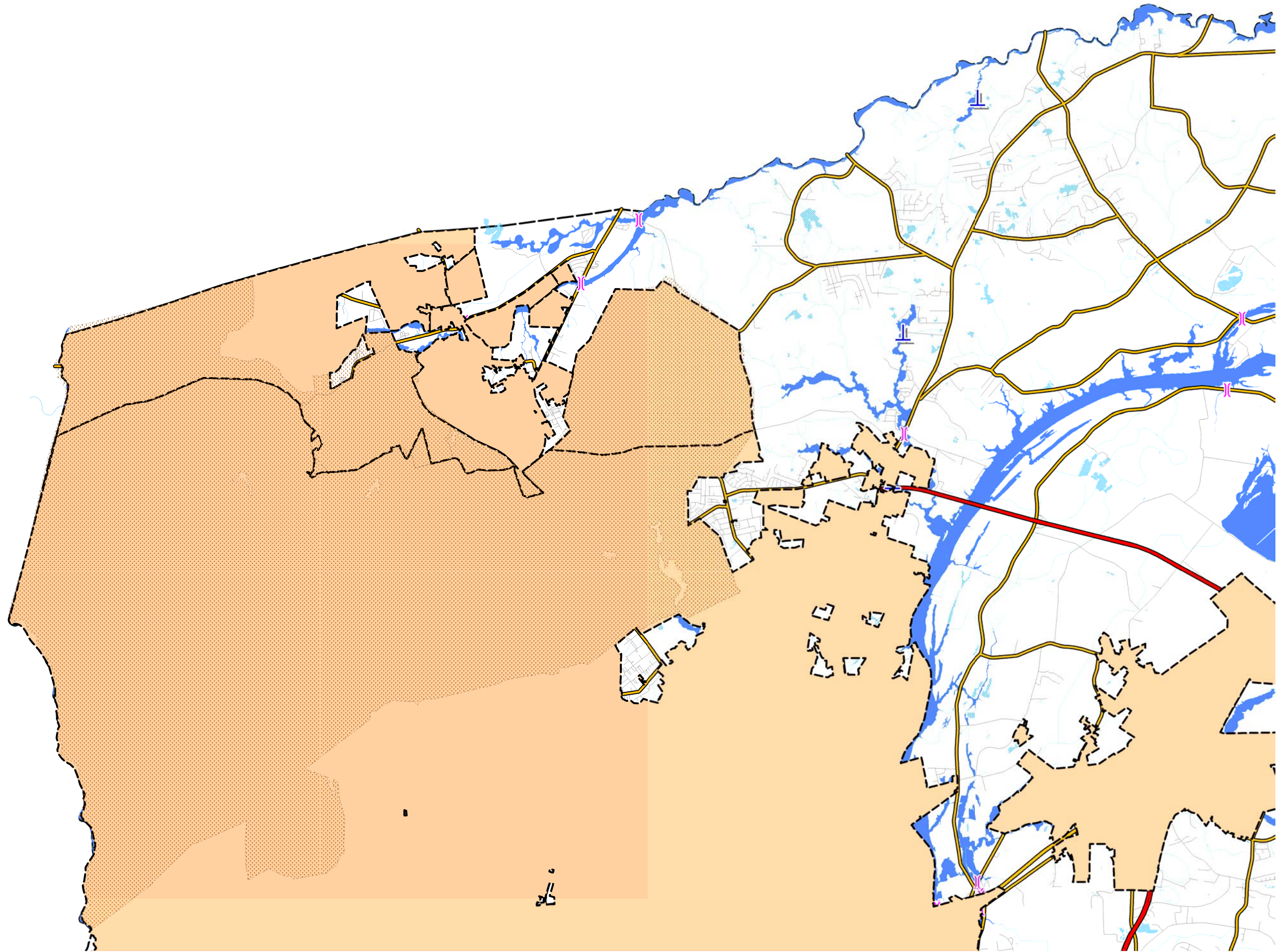




Legend

-  Cell Tower
-  Hazardous Materials
-  Water Tower
-  Bridge
-  Emergency Shelter
-  Fire Department
-  Public School
-  Municipal Boundary
-  Streams-Rivers
-  Lakes
-  Dams
-  Resthome
-  Ft. Bragg - Pope AFB
-  Sewage Treatment Facility





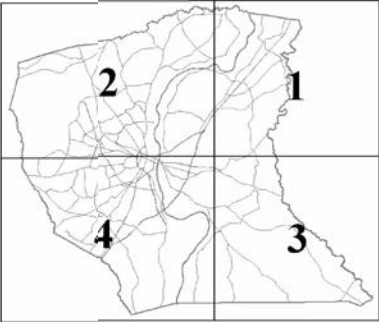
Map 7

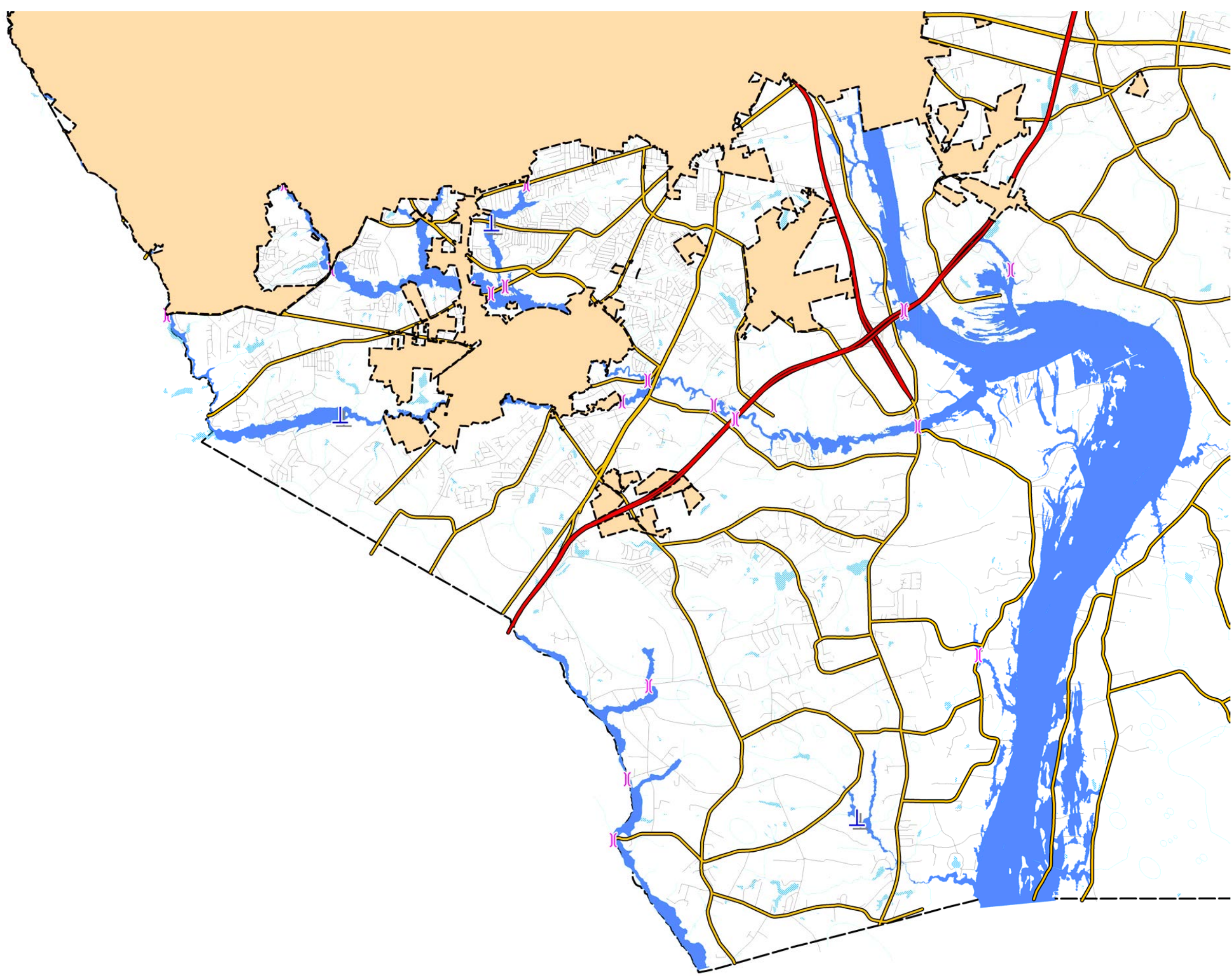
**Unincorporated
Area
Critical Facilities**

Within Designated Flood Area

Legend













- Cell Tower
- Hazardous Materials
- Bridge
- Fire Department
- Municipal Boundary
- Streams-Rivers
- Lakes
- Dams
- Resthome
- Ft. Bragg - Pope AFB
- Sewage Treatment Facility
- Designated Flood Area

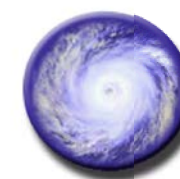
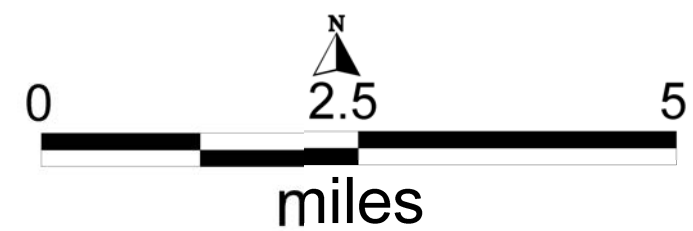






Legend

-  Cell Tower
-  Hazardous Materials
-  Bridge
-  Fire Department
-  Municipal Boundary
-  Streams-Rivers
-  Lakes
-  Dams
-  Resthome
-  Ft. Bragg - Pope AFB
-  Sewage Treatment Facility
-  Designated Flood Area



Cumberland County
Multi-Jurisdictional
**HAZARD
MITIGATION
PLAN**

Table 5 - Unincorporated Area Private Buildings Vulnerability Assessment

Hazard Type(s): Hurricane, Drought, Thunderstorms, Severe Winter Storms, Tornadoes, Extreme Heat, Wildfires, and Earthquakes

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Private Buildings	* Current Value	Current Number of People	Projected Number of Private Buildings	Projected Value	Projected Number of People
Single-Family Residential	29,946	\$7,054,559,150	71,407	36,327	\$8,557,706,017	86,622
Multi-Family Residential	747	\$216,624,916	13,290	906	\$262,782,168	16,122
Commercial	815	\$582,353,774	40,866	989	\$706,438,530	49,574
Industrial	180	\$498,541,770	16,344	218	\$604,768,323	19,826
Other	353	\$267,217,176	468	428	\$324,154,350	568
Subtotal	Bldgs. – 32,041	\$8,619,296,786	142,375	38,868	\$10,455,849,387	172,711

* Values and building counts from County GIS - January 2010
The methodology used in preparing this data is described in Appendix C.

Table 6 - Unincorporated Area Public Buildings & Critical Facilities Vulnerability Assessment

Hazard Type(s): Hurricane, Drought, Thunderstorms, Severe Winter Storms, Tornadoes, Extreme Heat, Wildfires, and Earthquakes

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Public Buildings & Critical Facilities	* Current Value	Current Number of People	Projected Number of Public Buildings	Projected Value	Projected Number of People
Sewage Treatment Plant	1	\$30,000,000	15	1	\$36,392,236	18
Sewer Pump / Lift Stations	34	\$13,600,000	0	41	\$16,497,814	0
Water Tank	1	\$6,000,000	0	1	\$7,278,447	0
Hospitals/Rest Homes	9	\$10,095,046	980	11	\$12,246,043	1,189
Schools	70	\$598,084,814	18,225	85	\$725,521,454	22,108
Infrastructure (roads, bridges, drainage, dams, etc.)	Water Lines - 2,023,324' Sewer Lines -1,149,775' Roads – 6,785,812' Bridges - 157 Dams - 38	\$182,099,160 \$172,466,250 \$1,282,518,468 \$415,400,000 \$77,000,000	N/A	Water Lines - 2,454,443' Sewer Lines - 1,394,763' Roads – 8,231,696' Bridges - 190 Dams - 46	\$220,899,853 \$209,214,415 \$1,555,790,486 \$503,911,159 \$93,406,739	N/A
Police Stations	1	\$2,671,976	50	1	\$3,241,306	61
Fire Stations	17	\$24,456,236	235	21	\$29,667,237	285
Hazard Materials Facilities	30	\$199,213,572	3,641	36	\$241,660,910	4,417
Government offices	17	\$16,753,852	48	21	\$20,323,671	58
Emergency Shelters	2	\$72,460,878	900	2	\$87,900,445	1,092
Public Housing	18	\$9,183,316	244	22	\$11,140,047	296
Subtotal	Buildings - 199 Infrastructure	\$982,519,690 \$2,129,483,878	24,338	Building - 242 Infrastructure	\$1,191,869,610 \$2,583,222,652	29,524
TOTAL:	Buildings – 32,240 & Infrastructure	\$11,731,300,354	166,713	Buildings – 39,111 & Infrastructure	\$14,230,941,650	202,235

* Values and building counts from County GIS - January 2010
The methodology used in preparing this data is described in Appendix C.

Table 7 - Unincorporated Area Private Buildings Flood Vulnerability Assessment

Hazard Type(s): Flood

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Private Buildings	* Current Value	Current Number of People	Projected Number of Private Buildings	Projected Value	Projected Number of People
Single-Family Residential	1071	\$296,541,672	2,838	1,299	\$359,727,149	3,443
Multi-Family Residential	61	\$9,335,446	2,096	74	\$11,324,592	2,543
Commercial	75	\$40,384,992	11,610	91	\$48,990,005	14,084
Industrial	58	\$100,169,536	5,856	70	\$121,513,113	7,104
Other	19	\$10,015,653	24	23	\$12,149,734	29
Subtotal	Bldgs. – 1,284	\$456,447,299	22,424	1,558	\$553,704,592	27,202

* Values and building counts from County GIS - January 2010
The methodology used in preparing this data is described in Appendix C.

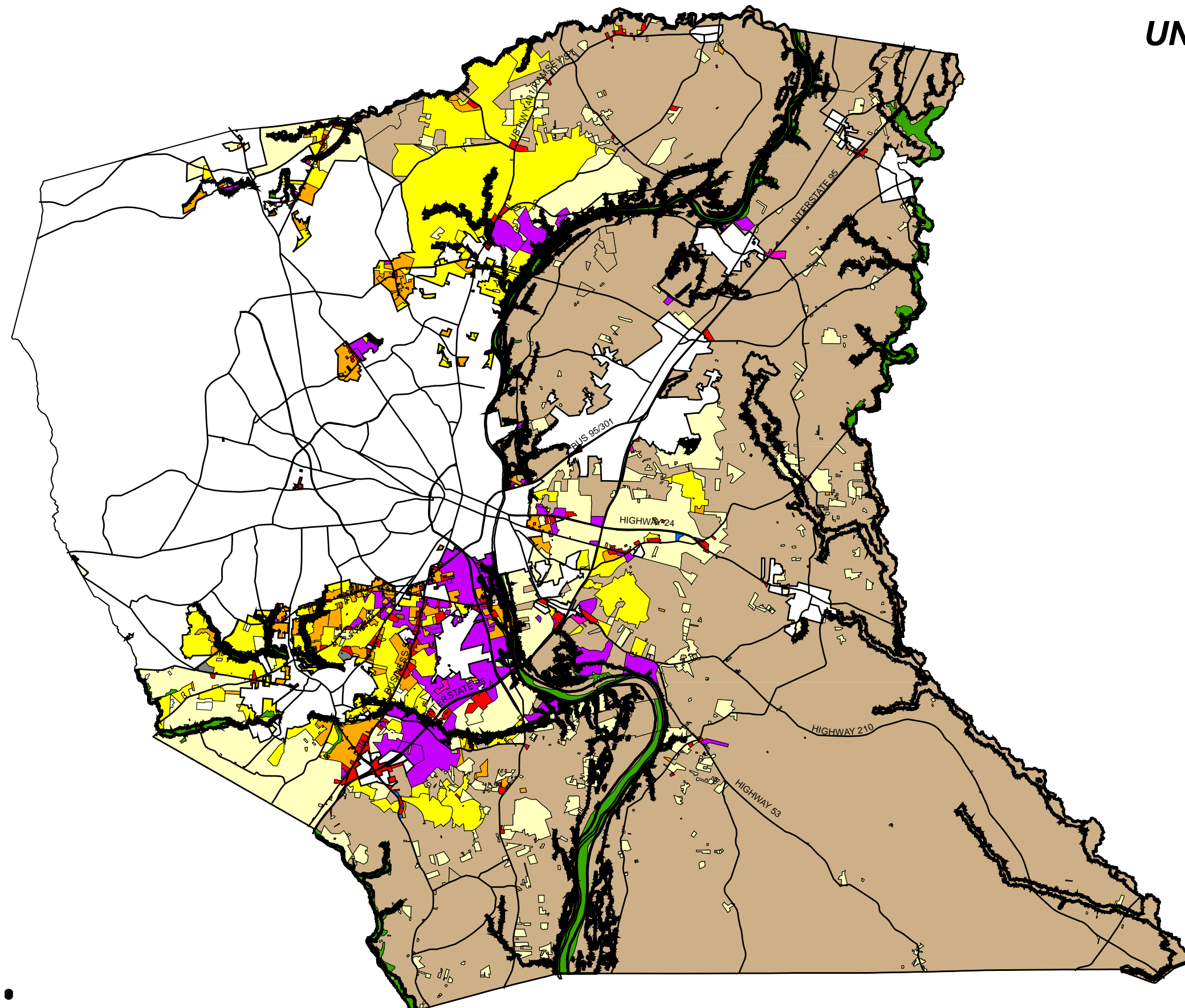
Table 8- Unincorporated Area Public Buildings & Critical Facilities Flood Vulnerability Assessment

Hazard Type(s): Flood

Current Conditions				Potential Future Conditions (Projection Year 2025)		
Type of Development	Number of Existing Public Buildings & Critical Facilities	* Current Value	Current Number of People	Projected Number of Public Buildings	Projected Value	Projected Number of People
Sewage Treatment Plants	1	\$30,000,000	15	1	\$36,392,236	18
Sewer Pump / Lift Stations	3	\$1,200,000	0	4	\$1,455,689	0
Water Towers	0	\$ 0	0	0	\$ 0	0
Hospitals/Rest Homes	0	\$ 0	0	0	\$ 0	0
Schools	0	\$ 0	0	0	\$ 0	0
Infrastructure (roads, bridges, drainage, dams, etc.)	Bridges - 38 Dams - 8 Sewer Lines – 90,586' Water Lines – 462' Roads – 125,105'	\$77,800,000 \$20,500,000 \$13,587,900 \$41,580 \$23,644,845	N/A	Bridges - 46 Dams - 10 Sewer Lines – 109,888' Water Lines – 560' Roads – 151,762'	\$94,377,198 \$24,868,028 \$16,483,136 \$50,440 \$28,682,959	N/A
Police Stations	0	\$ 0	0	0	\$0	0
Fire Stations	1	\$2,542,147	20	1	\$3,083,814	24
Hazard Materials Facilities	0	\$ 0	0	0	\$0	0
Government offices	8	\$4,234,798	23	10	\$5,137,126	28
Emergency Shelters	0	\$ 0	0	0	\$ 0	0
Public Housing	0	\$ 0	0	0	\$ 0	0
Subtotal	Buildings - 13 Infrastructure	\$37,976,945 \$135,574,325	58	Building - 16 Infrastructure	\$46,068,865 \$164,461,760	70
TOTAL:	Buildings – 1,297 & Infrastructure	\$629,998,569	22,482	Buildings – 1,573 & Infrastructure	\$764,235,217	27,272

* Values and building counts from County GIS - January 2010
The methodology used in preparing this data is described in Appendix C.

UNINCORPORATED AREA ZONING

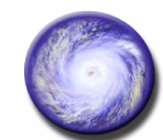


Legend

- SPECIAL FLOOD HAZARD AREA
- A1 - AGRICULTURAL DISTRICT
- A1A - AGRICULTURAL DISTRICT
- R40A - RESIDENTIAL DISTRICT
- R40 - RESIDENTIAL DISTRICT
- R30 - RESIDENTIAL DISTRICT
- R30A - RESIDENTIAL DISTRICT
- R20 - RESIDENTIAL DISTRICT
- RR - RESIDENTIAL DISTRICT
- R15 - RESIDENTIAL DISTRICT
- PND - RESIDENTIAL DISTRICT
- R10 - RESIDENTIAL DISTRICT
- R7.5 - RESIDENTIAL DISTRICT
- R6 - RESIDENTIAL DISTRICT
- R6A - RESIDENTIAL DISTRICT
- R5A - RESIDENTIAL DISTRICT
- R5 - RESIDENTIAL DISTRICT
- MXD - MIXED USE DEVELOPMENT DISTRICT
- O&I(P) - OFFICE & INSTITUTIONAL DISTRICT
- C(P) - COMMERCIAL DISTRICT
- C3 - COMMERCIAL DISTRICT
- C2(P) - COMMERCIAL DISTRICT
- C1(P) - COMMERCIAL DISTRICT
- HS(P) - HIGHWAY SERVICE DISTRICT
- M(P) - INDUSTRIAL DISTRICT
- M2 - INDUSTRIAL DISTRICT
- M1(P) - INDUSTRIAL DISTRICT
- CD - CONSERVANCY DISTRICT

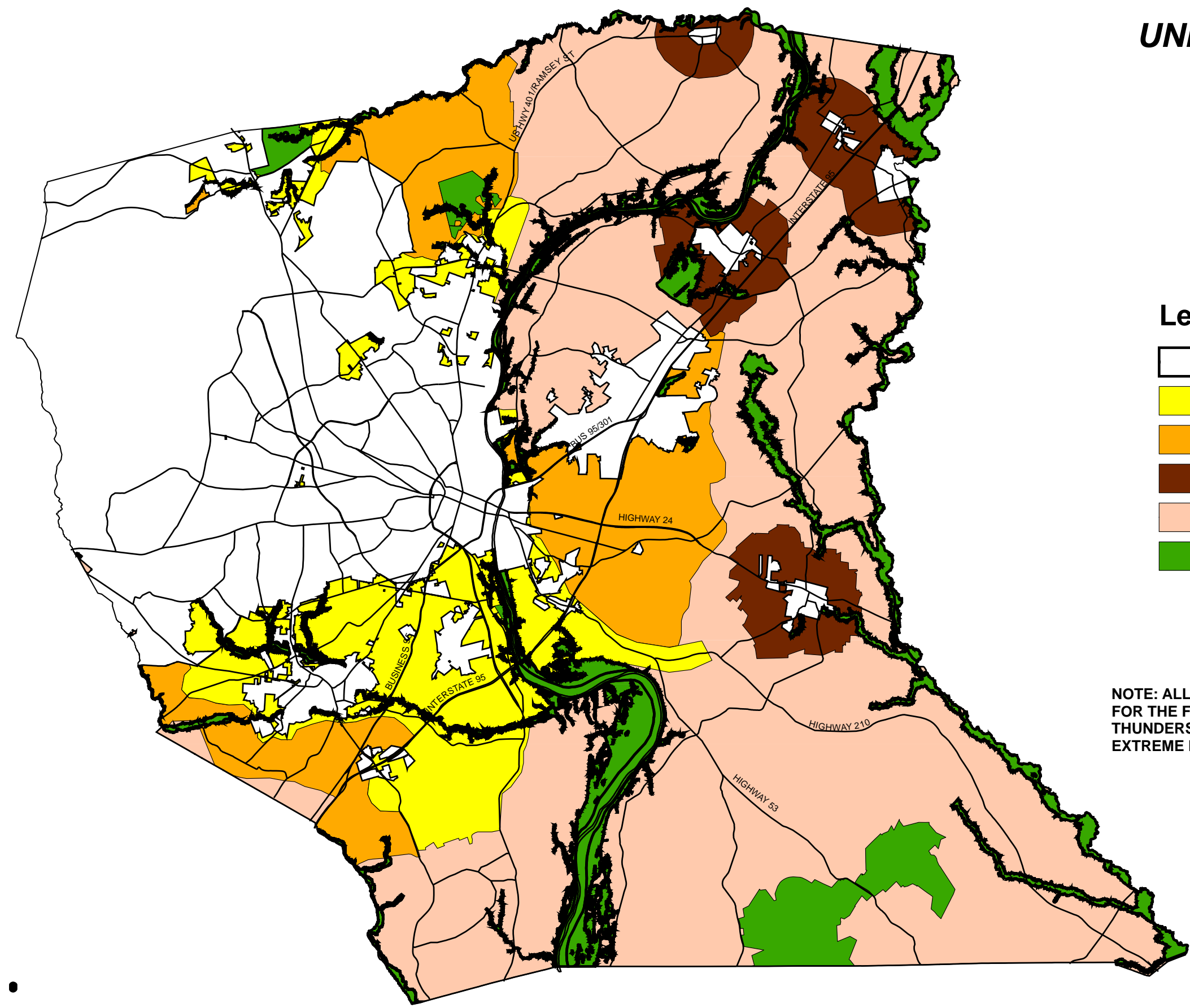
SCALE: NOT TO SCALE

NOTE: ALL OF THE UNINCORPORATED AREA IS DESIGNATED FOR THE FOLLOWING HAZARDS: HURRICANES, TORNADOES, THUNDERSTORMS, DROUGHTS, SEVERE WINTER STORMS, EXTREME HEAT, WILDFIRES AND EARTHQUAKES.









Cumberland County
Multi-Jurisdictional
**HAZARD
MITIGATION
PLAN
UPDATE**

UNINCORPORATED AREA LAND USE PLAN



Legend

-  SPECIAL FLOOD HAZARD AREA
-  URBAN AREA
-  URBAN FRINGE AREA
-  COMMUNITY GROWTH AREA
-  RURAL AREA
-  CONSERVATION AREA

NOTE: ALL OF THE UNINCORPORATED AREA IS DESIGNATED FOR THE FOLLOWING HAZARDS: HURRICANES, TORNADOES, THUNDERSTORMS, DROUGHTS, SEVERE WINTER STORMS, EXTREME HEAT, WILDFIRES AND EARTHQUAKES.

●
SCALE: NOT TO SCALE

CAPABILITY ASSESSMENT

Local Departments, Agencies and Organizations

An integral part of the Hazard Mitigation Capability Assessment is an inventory and analysis of local departments, agencies and organizations relevant to hazard mitigation. A list of these entities and a brief description is presented below. Many of these departments provide services to the municipalities within the County and will be noted under each municipal capability assessment.

Cumberland County Departments

Administration/Cumberland County Board of Commissioners
Animal Control
Emergency Services
Engineering
Finance
Health
Maintenance
Mental Health
Parks and Recreation
Planning and Inspections
Public Utilities
Sheriff's Department
Social Services
Solid Waste
Tax Administration

Administration/Cumberland County Board of Commissioners

A seven-member Board of Commissioners, who has the responsibility of improving the quality of life and protecting the public health, safety and welfare of the County residents, governs Cumberland County. The County Manager, hired by the Board of Commissioners, heads the County Administration. This position oversees all County departments, programs and operations pursuant to the policies, ordinances and directives adopted by the Board of Commissioners. The Deputy County Manager is responsible for the Human Services departments. Two Assistant County Managers are responsible for Financial and Administrative Services and General and Support Services, respectively. The Public Information Director, responsible for coordinating internal and external communication with the media, employees and the general public, is included within this Department.

Animal Control

The Animal Control Department enforces all State and local laws pertaining to the ownership, regulation and control of dogs, cats and other animals within the County. Responsibilities include picking up stray animals, livestock, exotic animals, nuisance wildlife and rabid animals, as well as checking for compliance with rabies vaccination laws and license mandates.

Central Maintenance Facility

The Central Maintenance Facility provides routine maintenance and repairs to County vehicles. Additionally, this Department stocks repair parts, emergency fuel and provides wrecker service for the County fleet.

Cooperative Extension

Charged with the responsibility of applying research-based information to improve the lives of citizens of Cumberland County, the Cumberland County Center of the North Carolina Cooperative Extension serves to focus on agriculture and natural resources, family and consumer services, 4H and youth development, and community resources development. The Extension is based at North Carolina's two land grant institutions North Carolina A&T State University and North Carolina State University, with offices in each of the 100 counties and on the Cherokee Indian Reservation.

Emergency Services

This Department is divided into three separate entities: Emergency Communications Center, Emergency Management and Fire Marshal. The Emergency Communications Center provides continuous assistance and support to the public for the safety and protection of life and property through the use of 9-1-1 and radio communications. The Emergency Management Department is responsible for mitigation, preparedness, and recovery in the event of an emergency. The Fire Marshal's Office enforces the North Carolina Fire Prevention Code and local ordinances, as well as serves as a liaison between County government and contracted fire departments.

Engineering

The Engineering Department provides planning, design, cost estimates and construction administration to other County departments for facility renovations as well as new projects. Additionally, the Department is responsible for procurement of architectural/engineering services, management of capital improvements projects, and administration of the Flood Damage Prevention Ordinance.

Finance

Charged with the responsibility of providing general accounting, payroll and purchasing services, the Finance Department also performs cash forecasting, investing, debt management, and fixed asset and budgetary control. Additionally, this Department submits reports to County Management, State and Federal agencies in accordance with North Carolina General Statutes and works with Department Heads in preparing the Annual Budget.

Health Department

The Health Department strives to protect the public health, safety and welfare of the citizens of Cumberland County through clinical and environmental services and educational opportunities. The Department is funded through Federal, State and local funds, as well as grants and fees collected for services. The Cumberland County Board of Commissioners appoints a seven-member Board of Health, which governs the Department.

Maintenance

This Department, responsible for the upkeep of all County buildings and grounds, is divided into four divisions: Building and Grounds, Carpentry Shop, Electrical/Mechanical, and Landscaping.

Mental Health

Governed by an Area Board of sixteen volunteers, the Cumberland County Mental Health Center provides mental health, developmental disabilities, and substance abuse services to Cumberland County residents. Outpatient and inpatient treatment, medical and non-medical detoxification, outreach and referral services are also available.

Parks and Recreation

The Parks and Recreation Department provides parks and recreational activities for County residents. Opportunities are available for all ages to participate in activities such as athletics, recreational classes and programs. Park facilities include Arnette and Lake Rim Parks, and Stedman Recreation Center. This Department also has a long-term relationship with the Cumberland County School System and operates several school park facilities. Additionally, this Department maintains these facilities and assists several Towns within the County with their park facilities.

Planning and Inspections

This Department provides comprehensive land use and transportation planning, zoning and subdivision administration, Census and growth information, and enforcement of the North Carolina Building Code, State and local laws, ordinances and regulations. Additionally, the E-911/Streets and Addressing Section coordination with Emergency Management services and provides addressing and street signs throughout the County. It provides planning services to the towns of Hope Mills, Spring Lake, Eastover,

Stedman, Falcon, Wade, Linden, and Godwin under the Cumberland County Joint Planning Board. This department also provides inspections services to all these towns except Spring Lake and Hope Mills.

Public Utilities

The Public Utilities Department is responsible for providing public utilities, such as water and sewer to Unincorporated Areas of Cumberland County. This includes assisting in procuring funding for utilities, supervision of construction and contract management. Additionally, staff works with the Eastover Sanitary District and NORCRESS Sanitary District.

Sheriff's Department

Responsible for providing law enforcement and protecting public health, safety and welfare, the Cumberland County Sheriff's Department is divided into three sections: Bureau of Narcotics, School of Law Enforcement, and Community Policing. Additionally, this Department is responsible for two jail facilities with a combined total of 856 beds.

Social Services

The Department of Social Services offers services such as: Work First Family Assistance Program, Food Stamps (EBT), Medicaid, Adult Services, Child Protection and Placement, Family Violence Center and Shelter, Family Counseling and group homes for juveniles.

Solid Waste Management

This Department provides an efficient use of a sanitary landfill in order to further efforts for future solid waste disposal-resource recovery system. The resource recovery system is designed to conserve natural resources, reduces the volume of non-recoverable waste and disposes it in an environmentally sound manner.

Stormwater Services

This is a joint Cumberland County and City of Fayetteville agency that assures continued compliance of the State mandated National Pollution Discharge Elimination System (NPDES) Municipal Permit. The objective of this is to monitor, control and limit pollution in municipal stormwater discharges in accordance with State requirements.

Tax Administration

The Cumberland County Tax Administration Office consists of the following divisions: Collections, Real Estate, Operations, Mapping and Customer Service. Mandated by statute, this Office is responsible for collecting all property, pet license, privilege and franchise taxes, special assessments and other fees and assessments charged by the governing body. All real property located in the County is assessed and mapped, as prescribed by law. The County's computer based geographically referenced information system (GIS) is implemented and maintained by this Department.

State and Local Agencies and Organizations

These local agencies and organizations provide services to all of the residents within the County, including each individual municipality; therefore this information will not be duplicated under each individual jurisdictional Capability Assessment.

Radio Amateur Civil Emergency Service

American Red Cross

Cape Fear Amateur Radio Society

Cape Fear Community Food Bank

Cape Fear Valley Hospital

Cumberland County Board of Education

Cumberland County Emergency Medical Services of Cape Fear Valley Health System

Cumberland County Veterinarian Association

Cumberland County Volunteer Fire Departments

Eastover Sanitary District
Fayetteville Urban Ministries
Highsmith-Rainey Memorial Hospital
N.C. Division of Motor Vehicles
N.C. Department of Agriculture and Consumer Services
N.C. Department of Crime Control and Public Safety
N.C. Department of Transportation
N.C. Wildlife Resources Commission
NCSU College of Veterinary Medicine
North Cumberland Regional Sewer System (NORCRESS)
Moore County Equine Emergency Response Unit
Public Works Commission
Salvation Army
SPCA of Cumberland County
Sprint Carolina Telephone and Telegraph
Star Telephone Membership Corporation
United Way of Cumberland County
VA Medical Center
Womack Army Medical Center

Radio Amateur Civil Emergency Service (RACES)

This organization consists of a group of reserve communications volunteers within government agencies called upon to perform communications tasks during an emergency. The Federal Emergency Management Agency (FEMA) provides planning guidance and technical assistance for establishing RACES at the State and local level. Administered on the local level by Emergency Management, the Federal Communications Commission (FCC) regulates RACES operations.

American Red Cross

The American Red Cross was authorized to provide disaster relief through a charter by Congress in 1905, although it is not a government agency. Disaster relief services focuses on meeting immediate emergency needs caused by a disaster, such as shelter, food, and health and mental health services. Additionally, the Red Cross provides blood and blood products to disaster victims, assists victims with accessing other available resources, feeds emergency workers and handles inquiries from concerned family members outside the disaster area.

Cape Fear Amateur Radio Society

This organization is composed of amateur radio operators within the Cape Fear region who are interested in radio on an amateur level. Members work to provide emergency and public service communications, advance and improve the State of the art and individual skills, maintain a group of qualified radio operators and promote international goodwill.

Cape Fear Community Food Bank

The Cape Fear Community Food Bank, a project of the Cumberland Community Action Program, Inc., was established to increase the amount of food donations within the Cape Fear Region and enable hunger relief agencies to serve more people. An advisory board, established by the governing board of the Community Action Program, Inc., has the authority to oversee operations and to ensure the Food Bank fulfills its mission of feeding the hungry.

Cape Fear Valley Hospital

Funded in 1954, this 741-bed facility serves a County population of approximately 300,000 as well as secondary services to Southeastern North Carolina and a few border counties in South Carolina. Serving as the center of the Cape Fear Valley Health System, this facility is the 10th largest medical facility in the State.

CenturyLink Telephone and Telegraph

Offering product bundles such as local, long distance, Internet and PCS, this telecommunications company serves 17 markets.

Cumberland County Board of Education

The Board of Education is responsible for operation of the Cumberland County School System, through establishment of policies that are carried out by the School Administration. The citizens of the County elect this Board.

Cumberland County Emergency Medical Services of Cape Fear Valley Health System

The Department provides emergency medical treatment including medical care, emergency transportation and Life Link.

Cumberland County Veterinarian Association

This Association is comprised of veterinarians practicing within Cumberland County working to ensure the protection of animals.

Cumberland County Volunteer Fire Departments

These departments provide fire protection and rescue service to specific districts within Cumberland County (excluding the City of Fayetteville and the Military). Funding raised through property tax, is used to pay for salaries of full-time and part-time firefighters, facilities and equipment. Each of the fire districts is governed by a set of bylaws authorizing a Board of Directors, elected by residents within each district, to manage the affairs of the district. The following stations provide fire protection and rescue service to the Unincorporated Area of Cumberland County and the Towns of Falcon, Godwin, Hope Mills, Linden, Spring Lake, Eastover, Stedman and Wade:

- Station 1 – Eastover
- Station 2 – Vander
- Station 3 – Pearces Mill
- Station 4 – Cotton
- Station 5 – Cumberland Road
- Station 8 – Cedar Creek
- Station 11 – Lake Rim
- Station 12 – Bethany
- Station 13 – Stoney Point
- Station 15 – Westarea (Carver's Creek)
- Station 16 – Wade
- Station 17 – Godwin – Falcons
- Station 18 – Grays Creek (Fire Department Road)
- Station 19 – Stoney Point (Lake Upchurch)
- Station 20 – Westarea (Linden)
- Station 21 – Hope Mills
- Station 22 – Spring Lake
- Station 23 – Stedman
- Station 24 – Grays Creek (Sandhill Road)
- Station 26 – Beaver Dam

Eastover Sanitary District

The District was formed to meet the water and sewer needs of a rural area experiencing demands for housing and services due to its proximity to the City of Fayetteville, Interstate 95 and the Outer Loop (U.S. Highway 13 Extension). A three member Board of Directors, elected by the residents within the Sanitary District, governs the District.

Fayetteville Urban Ministry

Fayetteville Urban Ministry is an ecumenical, interfaith ministry for people in need. It is supported by Christian, Jewish and Muslim congregations, individuals, local businesses and civic groups, the United Way and private and public grants. It is a tax-exempt, non-profit charity operation several outreach programs: Re-Store, a retail clearinghouse for surplus new and salvaged building materials; Emergency Assistance, such as food, clothing, household items, toiletries, weekly change of clothes for homeless clients, and firewood during winter months to clients dependent on wood for heating; Find-a-Friend, an alternative local program available to the juvenile court system matching a youth, either presently involved or at risk of becoming involved in the court system, with adult volunteers for mentoring and participation in recreational and cultural activities; Nehemiah Project, providing emergency repairs for owner-occupied low-income housing or disabled; and an Adult Reading Program designed to help adults improve their reading and writing skills.

Highsmith-Rainey Memorial Hospital

This 133-bed hospital provides a comprehensive range of inpatient and outpatient medical, surgical and diagnostic services. This hospital, which was founded in 1901 by two physicians, is part of the Cape Fear Valley Health System.

N.C. Division of Motor Vehicles

This Division provides quality motor vehicle services such as commercial trucking regulations, driver licensing, vehicle registration, tags, stickers, titles; driver records, emission inspections and promotes highway safety.

N.C. Department of Agriculture and Consumer Services

The North Carolina Department of Agriculture, comprised of 20 divisions, is responsible for providing the following services: research and statistical information relative to agriculture, agri-tourism, analysis and inspection of soils, plant solutions, irrigation water, animal, municipal and industrial wastes, seed, fertilizer, food, drugs, and animals in order to improve production and protect the consumer as well as the environment; licensing of aquaculture operations, reduction of vulnerability and minimize the impact from natural and man-made disasters; operate the State Fair; pest control, marketing and veterinary care.

N.C. Department of Crime Control and Public Safety

This Department is charged with the responsibility of reducing crime and enhancing public safety by planning and coordinating response, recovery and mitigation efforts in the event of a disaster; fostering collaboration among justice agencies and the community; enforcing laws and regulations within the Department's jurisdiction; managing resources to support crime prevention efforts and assisting innocent victims of crime.

N.C. Department of Transportation

The North Carolina Department of Transportation is responsible for providing and supporting a safe and integrated transportation system that enhances the State. This is accomplished through two separate means. First, the Department directs, plans, constructs, maintains and operates the second largest State-maintained transportation system in the nation. This includes aviation, ferry, public transportation and highway systems. Second, NCDOT licenses and regulates the citizens and motor vehicles that utilize these transportation systems.

N.C. Wildlife Resources Commission

The Commission is dedicated to the proper use, conservation and management of the fish and wildlife resources in the State. This is accomplished by a staff of fisheries and wildlife biologists, wildlife enforcement officers, educators, engineers and administrative personnel within nine districts throughout the State.

NCSU College of Veterinary Medicine

Established in 1978, the College of Veterinary Medicine has 285 DVM students and 150 students pursuing other forms of advanced academic training. Additionally, the college provides research, clinical services, and on-site continuing education and outreach programs not only in North Carolina but also worldwide.

North Cumberland Regional Sewer System (NORCRESS)

The Towns of Falcon, Godwin and Wade have formed a County Water and Sewer District (NORCRESS) to provide water and sewer service to this portion of Cumberland County. The Cumberland County Board of Commissioners governs this System.

Public Works Commission

This Commission was created by the State Legislature to manage, operate and supervise electricity, water and sanitary sewer services within the City of Fayetteville. Additionally, PWC services are provided outside the City limits, including a merger with the Town of Hope Mills and services on a contract basis to NORCRESS, Spring Lake, Stedman and Hoke County.

Moore County Equine Emergency Response Unit

The Moore County Equine Emergency Response Unit provides emergency services to equine veterinarians in the Sandhills region of North Carolina as well as surrounding areas. This Unit provides both emergency care as well as emergency transportation to a veterinary hospital or other facility. Based in Southern Pines, this is a non-profit organization operated by volunteers.

Salvation Army

This international organization, part of the ministry of the universal Christian Church, works to spread the gospel of Jesus Christ and to meet human needs without discrimination. The organization is divided into worldwide territories with local community centers throughout North Carolina. These community centers provide a place for worship, cultural activities, outreach services, and emergency relief and shelter facilities.

SPCA of Cumberland County

This organization is a County-level chapter of the American Society for the Prevention of Cruelty to Animals (ASPCA). This privately funded 501 [c][3] not-for-profit corporation provides shelter support, medical services, placement, humane education, public awareness, and government advocacy.

Star Telephone Membership Corporation

Chartered in 1959, Star Telephone Membership Corporation provides advanced telecommunications to approximately 20,000 customers covering a 1,458 square-mile area. Services include long distance calling, broadband access and cable television.

United Way of Cumberland County

Established in 1939, the Cumberland County chapter of the United Way provides an organized means of fundraising available for broad-based participation and funds distributed to participating agencies and organizations. There is also an opportunity for citizens to volunteer at the participating agencies and organizations.

Veterans Administration Medical Center

The Fayetteville VA Medical Center (FVAMC) provides medical, surgical, dental and mental health services to veterans. The facility is part of a Veterans Integrated Service Network (VISN) and has an assigned population of approximately 155,747 veterans. Additionally, this facility has a 69-bed long term care facility, educational programs and outreach clinics.

Womack Army Medical Center

The facility, designed for 187 beds during normal operations and 431 beds during mobilization, provides medical care to approximately 160,000 eligible people. This figure includes active-duty troops, active-

duty family members, retirees and retiree family members. In addition to specialty clinics located within the facility, four primary care facilities are operated under the Medical Center at other locations on Post.

Policy and Program Capability

This section includes the identification and evaluation of existing ordinances, policies, and programs that are relevant to the Unincorporated Area's vulnerability to natural hazards. This inventory consists of specific mitigation initiatives, their effectiveness and strategies to improve mitigation effectiveness. Most of the actions in the original Mitigation Plan that require ordinance revisions or policy changes have been completed and/or adopted. The Planning Staff currently has an annual process of rewriting, updating (zoning and subdivisions) and creating new ordinances for the unincorporated area. These ordinances comply with many of the mitigation actions that the County has already endorsed. Those actions that have not been completed are more developer resistance and cost prohibit. The Technical Committee will continue educating citizens, elected officials and development community concerning mitigation and the Plan's actions. Additionally, this information is contained within **Table 9 - Inventory of Local Ordinances, Policies and Programs Relevant to Hazard Mitigation Cumberland County (Unincorporated Area)**.

Cumberland County Subdivision Ordinance - The Cumberland County Subdivision Ordinance contains several sections that are relevant to hazard mitigation. These sections address specific design standards that mitigate hazards such as flooding, fire, stormwater detention/retention, drainage and severe weather storm damage. This ordinance regulates lots and specific uses (mobile home parks and parks and recreation areas) located in whole or in part, in areas of special flood hazard.

Cumberland County Zoning Ordinance - The Cumberland County Zoning Ordinance addresses hazard mitigation by protecting identifiable natural resources from urban encroachment by establishing the CD Conservancy District that allows a limited number of allowable land uses. The ordinance also provides adequate separation of structures and yard space.

Cumberland County Water Supply Watershed Management and Protection Ordinance - The Water Supply Watershed Management and Protection Ordinance are designed to minimize the amount of stormwater runoff and to protect the public water quality within the Cape Fear River Watershed Area Class WS-IV and the Cross Creek Watershed Area Class WS-IV. In addition to portions of Cumberland County falling within the Watershed Areas, a portion of the Town of Spring Lake and a portion of the Town of Wade fall within the Watershed Area Class WS-IV. This Ordinance has been adopted by both jurisdictions. The County recently adopted a Water Supply Watershed Area (Southern Portion of the Cape Fear River) for the Grays Creek community.

Flood Damage Prevention Ordinance - Cumberland County has developed and adopted a Flood Damage Prevention Ordinance designed to minimize the public and private losses due to flood conditions in specific areas and to protect the public health, safety and welfare. This ordinance establishes the requirements for elevation and flood proofing (non-residential) to base flood elevation and a development permit.

National Flood Insurance Program and Community Rating System - The National Flood Insurance Program (NFIP) provides flood insurance to individuals in local jurisdictions that are members of the program. Membership in the Program is based upon the adoption and enforcement of floodplain management and development regulations. Compliance of the NFIP for the Unincorporated Area, Eastover, Falcon, Godwin, Linden, Stedman and Wade is responsibility of the Cumberland County Engineering Department. They maintain the Cumberland County flood maps and Flood Damage Prevention Ordinance and issue Floodplain Development Permits for those jurisdictions in accordance with compliance of NFIP. An element of the NFIP is the Community Rating System (CRS), which adjusts flood insurance premiums relative to a local jurisdiction's investment in flood damage mitigation. Inclusion in the CRS involves submitting a local jurisdiction's floodplain management procedures for

evaluation. Cumberland County currently has a CRS rating of 8 effective October 1, 2010. The Cumberland County Engineering Department is responsible for this program for Cumberland County.

NCDOT Subdivision Roads Minimum Construction Standards - The North Carolina Department of Transportation has established minimum construction standards for new subdivision roads (to be dedicated as public or private). According to North Carolina General Statutes, all new subdivision roads connecting to the State system must obtain a construction permit from a Division of Highways District Engineer and must meet these construction standards. Standards relevant to hazard mitigation include: surface and subsurface drainage, bridges, roadway dams, and specifications for design and construction to accommodate emergency vehicles.

Cumberland County 2030 Growth Vision Plan Policies, Actions, and Map

Cumberland County, along with all the municipalities in the County adopted this land use plan which serves as a guide for development. This Plan contains several recommendations relevant to hazard mitigation. The Plan recommends the provision of open space/environmental corridors along rivers and major water features, which reduces the amount of development within and adjacent to the floodplain and protects the natural riparian cover adjacent to these water features. Recommendations also include using environmental corridors as a network of greenways connecting recreation and school facilities with natural areas. The Plan recommends all development activity within the Special Flood Hazard Area be limited to low intensity uses. Development standards are also recommended to reduce the amount of impervious surfaces and to protect existing natural features. A general Land Use Plan Map was also adopted, which provides a guide for orderly growth and development. The Plan applies to all of the jurisdictions within the County.

Cumberland County Land Use Policies Plan

Cumberland County and its municipalities have developed and adopted a land use policies plan which serves as a guide for development. This Plan contains location criteria for development relevant to hazard mitigation by limiting the type and intensity of development within the Special Flood Hazard Area.

Stedman Area Detailed Land Use Plan and Map - The Stedman Area Detailed Land Use Plan addresses several issues relevant to hazard mitigation. These issues include: a thoroughfare plan that provides for safe vehicular movement, protection of the natural drainage system from urban encroachment, and a plan for orderly growth and development. The Stedman Board of Commissioners and the Cumberland County Board of Commissioners adopted the Plan, as a portion of the Study falls within the Unincorporated Area of the County.

Eastover Study Area Detailed Land Use Plan and Map - This detailed land use plan, adopted by the Board of Commissioners, covers an Unincorporated Area of the County that is experiencing change such as the creation of the Eastover Sanitary District, construction of the Outer Loop and growth occurring in the area. This Plan contains several recommendations relevant to hazard mitigation. The Plan recommends the provision of open space/environmental corridors along rivers and major water features, which reduces the amount of development within and adjacent to the floodplain and protects the natural riparian cover adjacent to these water features. Recommendations also include using environmental corridors as a network of greenways connecting recreation and school facilities with natural areas. Additionally, the Plan recommends that all residential development be above the 100-year flood elevation. Development standards are also recommended to reduce the amount of impervious surfaces and to protect existing natural features. Additionally, the Plan recommends that the Flea Hill Drainage Canal system should be upgraded. A Land Use Plan Map was also adopted, which provides a guide for orderly growth and development.

North Fayetteville Study Area Detailed Land Use Plan and Map - This Plan, prepared jointly by the County and City of Fayetteville Planning Staffs and adopted by the Board of Commissioners and Fayetteville City Council, covers an Unincorporated Area of the County and the northern portion of the City of Fayetteville. Issues relevant to hazard mitigation, such as underground utilities, protecting natural resources, using environmental corridors as a network of greenways connecting recreation and school

facilities with natural areas, and reduction of the amount of impervious surfaces. A Land Use Plan Map was also adopted, which provides a guide for orderly growth and development.

Wade Area Detailed Land Use Plan and Map - The Wade Area Detailed Land Use Plan addresses several issues relevant to hazard mitigation. These issues include: provision of open space/environmental corridors and buffers along water bodies protecting the natural drainage system from urban encroachment, provides an Action Plan suggesting creation of ordinances, development standards and a CIP addressing environmental protection and mitigation measures, a thoroughfare plan that provides for safe vehicular movement, and a plan for orderly growth and development. The Wade Board of Commissioners and the Cumberland County Board of Commissioners adopted the Plan, as a portion of the Study falls within the Unincorporated Area of the County. A concise explanation of this mitigation strategy is contained in

Northeast Vision Plan

This Plan was a detailed land use plan that included the northeastern portion of Cumberland County which includes the Towns of Falcon and Godwin. Its objective was to develop a plan that respects the character of the Area, accommodates the anticipated growth; preserves and protects the natural features, historic and scenic sites, rural farm stead, and farmland; maintain the uniqueness of the Towns in the Area and create opportunities for the provision of public and commercial services to enhance the quality of life in the Area.

Fayetteville/Cumberland County Recreation Parks and Open Space Master Plan - This Master Plan provides recommendations for utilizing existing facilities, natural resources, and open spaces in a manner that will protect environmentally sensitive areas, as well as provides a plan for acquisition of land for active and passive recreation facilities.

2000 International Building Code with North Carolina Amendments - This Code provides specific standards for plumbing, building, mechanical and electrical construction, mandated by the State of North Carolina. This Code is under the jurisdiction of the North Carolina Department of Insurance and is enforced locally by the Cumberland County Planning and Inspections Department

N.C. General Statutes 113A Article 4 Sedimentation Pollution control Act - This Act provides a mechanism to protect existing natural resources and the public health, safety and welfare through sedimentation and erosion control. The State of North Carolina administers permitting and enforcement measures for Cumberland County and the municipalities therein.

Mobility 2035 Long Range Transportation Plan - The Mobility 2035 Long Range Transportation Plan provides detailed planning and classifications for the road network within the Urban Planning Area in order to provide adequate traffic movement. Classifications and design specifications are assigned to roads in order to ensure adequate right-of-way and design as transportation improvements are initiated.

Fayetteville Area Metropolitan Planning Organization - This Organization provides comprehensive transportation planning for the Metropolitan Planning Area in Cumberland County, including portions of the Unincorporated area of the County.

Mid-Carolina Rural Planning Organization - The Mid-Carolina Rural Planning Organization provides detailed planning and classifications for the road network within the Rural Planning Area in order to provide adequate traffic movement. Classifications and design specifications are assigned to roads in order to ensure adequate right-of-way and design as transportation improvements are initiated.

Cumberland County Emergency Operations Plan - Cumberland County prepared and adopted this Plan in order to reduce the vulnerability of people and property to a disaster and to provide an effective means of response in the event of a disaster. This Plan also includes an inventory of critical facilities that would be impacted during a disaster.

Sandhills Area Land Trust - The Sandhills Area Land Trust is a non-profit organization working with citizens, developers, local government, and landowners to preserve the natural resources and environment within the Sandhills. This organization is working with Cumberland County, as well as 6 other counties, to accept donations of land, arrange leases to protect special land holdings and works to negotiate conservation easements.

Cape Fear River Assembly - The Cape Fear River Assembly has a membership of approximately 400 and a 34-member Board of Directors representing 29 counties within the Cape Fear River Basin. The purpose of the Assembly is to provide the highest quality of life for residents within the Cape Fear River Basin through proper management of the Cape Fear River, its tributaries and adjacent land uses.

Sustainable Sandhills - This initiative, comprised of members of communities within 6 counties bordering Fort Bragg and Camp Mackall and the Military, is working to provide a model for regional sustainability planning. Sustainability planning focuses on balancing preservation of natural resources, economic development strategies, development, and Military operations. Cumberland County is represented within this initiative.

Joint Compatible Land Use Study 2003 - The purpose of this Study is to provide policies and implementation measures to mitigate conflicts between urban development and Military operations at Fort Bragg, Pope Air Force Base and Camp Mackall. Cumberland County is included within this Study. A portion of this Study is directed toward measures designed for the recovery of the Red Cockaded Woodpecker.

**Table 9 - Inventory of Local Ordinances, Policies & Programs Relevant to Hazard Mitigation Cumberland County
(Unincorporated Area)**

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2303- E(2)	To provide for existing or future drainage needed to protect public health, safety, and welfare.	MODERATE	This Ordinance establishes minimum development standards.	Establish detailed development standards.
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2308	To provide standards for park, recreation, open space areas to protect public health, safety, and welfare.	HIGH	This Ordinance provides specific design standards that address stormwater detention/retention facilities and the 100-year flood elevation.	
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2303 - G	To provide standards for lots located within areas of special flood hazard and lots subject to flooding	HIGH	This Ordinance provides specific standards that address lots subject to flooding.	
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2304	To provide standards for street design needed to protect the public health, safety, and welfare.	MIDERATE	This Ordinance provides specific standards that address street design to accommodate fire and rescue vehicles.	Amend to require additional entrance into the development for rescue vehicle and evacuation routes.
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2401	To provide standards for adequate physical separation of buildings to protect the public health, safety, and welfare.	HIGH	This Ordinance provides specific standards that address building separation.	
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2404	To provide standards for the location and design of mobile home parks needed to protect the public health, safety, and welfare	HIGH	This Ordinance does not allow mobile home parks to be located within floodplain areas and has standards drainage. Additionally, this ordinance addresses physical separation between units, density and fire protection.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2306	To provide a development standard recommending underground utilities (except for high voltage electrical lines) and fire hydrants.	HIGH	This Ordinance provides specific development standards that would reduce the impact of weather related disasters upon utilities and provide fire protection capabilities.	
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2304	To provide standards for the construction of streets within a subdivision.	HIGH	This Ordinance provides specific standards that address drainage relevant to streets.	
Cumberland County Subdivision Ordinance Revised 8/19/08	Section 2307 - A	To provide standards for drainage during the construction of or improvements within a subdivision.	MODERATE	This Ordinance provides specific standards that address drainage during construction or improvements within a subdivision.	Amend to include standards to reduce the amount of impervious surfaces within a subdivision.
Cumberland County Subdivision Ordinance 8/19/08	Section 2306 - B	This ordinance specifies the location, supply, maintenance, and design criteria of fire hydrants	HIGH	This ordinance insures the adequate location of fire hydrants to provide fire suppression service to the general public.	Reduces risk of contamination caused by flooding
Cumberland County Subdivision Ordinance 08/19/08	Section 2306 A	To provide the installation of public water and sewer systems	HIGH	This ordinance provides the installation of public water and sewer systems for a healthier environment.	Reduces the risk of real property, and reduces costs to homeowners to properly insure their homes
Cumberland County Subdivision Ordinance 08/19/08	Section 2306-C	This ordinance provides standards for the underground installation of all utilities within new development.	HIGH	This ordinance provides assurance that infrastructure services interruptions due to acts of man or nature are kept at a minimum.	Reduces the possibility of power outages that could affect dependant and vulnerable citizens.
Cumberland County Zoning Ordinance Revised 02/19/08	Section 302	To preserve and protect identifiable natural resources from urban encroachment by establishing a limited number of allowable land uses.	HIGH	This Ordinance provides a specific list of permitted uses allowed within the CD Conservancy District. Additionally, the ordinance provides a list of specified conditional uses that may be approved by the Board of Adjustment.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Cumberland County Zoning Ordinance Revised 02/19/08	Section 1101 - A	To provide adequate separation of structures in order to protect the public water quality as well as public health, safety, and welfare.	HIGH	This Ordinance requires separate yard space for buildings, zoning district dimensional requirements and physical separation of mobile homes within a mobile home park.	
Water Supply Watershed Management & Protection Ordinance Revised 10/17/06		To minimize the amount of stormwater runoff within Water Supply Watershed Areas and protect the public water quality as well as public health, safety, and welfare. The County recently adopted a Water Supply Watershed Area (Southern Portion of the Cape Fear River) for the	MODERATE	This Ordinance requires a Watershed Protection, Building Permit and Watershed Occupancy Permit.	Amend to limit the amount of impervious surfaces within the Watershed Areas.
Flood Damage Prevention Ordinance 10/17/06		To minimize the public and private losses due to flood conditions in specific areas and to protect the public health, safety, and welfare.	HIGH	This Ordinance outlines general standards required in all special flood hazard areas and specific development standards required in all special flood hazard areas where base flood elevation data has been provided. A floodplain development permit is required.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
National Flood Insurance Program		To provide flood insurance for individuals within jurisdictions having membership in the program. Membership is based upon having floodplain management and development regulations. Compliance to the NFIP is the responsibility of the Cumberland County Engineering Department. Effective 10/1/2010 Cumberland County CRS is an 8.	HIGH	Member	
NCDOT Subdivision Roads Minimum Construction Standards 01/11/2000	Minimum Design and Construction Criteria Section	To provide standards for the design, construction and maintenance of subdivision roads in order to protect the public health, safety, and welfare.	HIGH	This Manual outlines specific design, construction and maintenance standards to mitigate potential flooding due to subdivision road construction.	
2030 Growth Vision Plan, Policies, and Actions 04/20/09	Pages 37-38	To protect the Special Flood Hazard Area. To reduce the amount of impervious surfaces.	MODERATE	The Plan recommends all development activities in the Special Flood Hazard Area be limited to low intensity uses such as open space, recreation, and adequately buffered agricultural activities.	
Cumberland County Land Use Policies Plan 04/20/09	Page 28	To protect the Special Flood Hazard Area	MODERATE	The Plan recommends location criteria for development within the Special Flood Hazard Area	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Stedman Area Detailed Land Use Plan 3/15/99	Page 71	To provide an adequate road network to accommodate existing and future vehicular traffic.	HIGH	The Plan recommends a Thoroughfare system that would provide vehicular movement that would not compromise the public health, safety, and welfare.	
Stedman Area Detailed Land Use Plan 3/15/99	Page 72	To protect the natural drainage system from urban encroachment.	HIGH	The Plan recommends a 10-foot wide preservation easement on either side of the banks of the watercourses.	
Stedman Area Detailed Land Use Plan 3/15/99	Page 73	To provide an orderly guide for growth and development to protect the public health, safety, and welfare.	HIGH	The Plan provides a land use plan map to guide future development decisions.	
Eastover Study Area Detailed Land Use Plan 8/16/2000	Page 82	To protect rivers, streams and drainage ways from urban encroachment.	HIGH	The Plan recommends protecting rivers, streams, and drainage ways from urban encroachment and to upgrade the Flea Hill Drainage Canal System.	
Eastover Study Area Detailed Land Use Plan Map 8/16/2000	Page 91	To provide an orderly guide for growth and development to protect the public health, safety, and welfare.	HIGH	The Plan provides a land use plan map to guide future development decisions.	
North Fayetteville Study Area Detailed Land Use Plan 01/03	Page 63	To provide development standards addressing utilities.	HIGH	This Plan recommends that the City of Fayetteville and Cumberland County codes be amended to require underground utilities.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
North Fayetteville Study Area Detailed Land Use Plan 1/03	Page 63, Page 76	To reduce the amount of impervious surfaces and to protect natural areas and resources.	HIGH	This Plan recommends developing and/or improving and enforcing ordinances that address clear cutting, landscaping and buffers.	
North Fayetteville Study Area Detailed Land Use Plan 1/03	Page 64	To provide proper location, density and maintenance of all housing types in order to protect the public health, safety, and welfare.	HIGH	The Plan recommends restricting density, location and design standards of new housing and enforcement of code enforcement and compliance programs for existing housing.	
North Fayetteville Study Area Detailed Land Use Plan 1/03	Page 64	To provide a community- wide recreational network to include open space and bike/walking paths and greenways designed to protect the public health, safety and welfare.	HIGH	The Plan recommends building bike/walking paths over and/or under major thoroughfares, design and implement a system of pedestrian access, provide open space and park facilities near large-scale residential developments and expedite the development of the greenway along the Cape Fear River.	
North Fayetteville Study Area Detailed Land Use Plan 1/03	Page 65	To provide adequate and efficient emergency, health and law enforcement service within the Study Area.	HIGH	The Plan recommends promotion of a faster response time for emergency personnel, provision of a medical facility, which is open daily (24 hours), and revise and enforce codes requiring minimum number of entrances/exits for emergency vehicular access.	
North Fayetteville Study Area Detailed Land Use Plan 1/03	Page 65, Page 73	To provide adequately planned, designed and maintained pedestrian and vehicular facilities within the Study Area.	HIGH	The Plan recommends provision of curb and gutters for all new development and planning for and building greenways.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
North Fayetteville Study Area Detailed Land Use Plan Map 1/03	Page 78	To provide an orderly guide for growth and development to protect the public health, safety, and welfare.	HIGH	The Plan provides a land use plan map to guide future development decisions.	
Wade Area Detailed Land Use Plan 2/04	Page 45	To provide adequate public safety and emergency services to residents within the Study Area.	HIGH	This Plan provides specific recommendations to accomplish this goal.	
Wade Area Detailed Land Use Plan 2/04	Page 54	To provide multi-modal transportation to meet the needs of the residents within the Study Area.	HIGH	This Plan provides specific recommendations for vehicular, pedestrian and rail transportation designed to protect the public health, safety, and welfare.	
Wade Area Detailed Land Use Plan 2/04	Page 55	To provide open space/environmental corridors along rivers, streams, creeks, drainage ways, bluffs and other natural areas.	HIGH	This Plan recommends the provision of open space/environmental corridors along water bodies, which reduces the amount of development within and adjacent to the floodplain.	
Wade Area Detailed Land Use Plan 2/04	Page 64	To provide mechanisms for planning for hazard mitigation activities.	HIGH	This Plan provides an Action Plan that includes development of ordinances, development standards, CIP, and environmental protection measures.	
Wade Area Detailed Land Use Plan 2/04	Page 61	To provide an orderly guide for growth and development to protect the public health, safety, and welfare.	HIGH	The Plan provides a land use plan map to guide future development decisions.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Northeast Vision Plan 03/15/10	Pages 63-69	To preserve and protect the natural features, historic and scenic sites, rural farmstead, and farmland	Moderate	The Plan recommends the adoption of a water & sewer policy for extension into farmland areas; encourage farmer to participate in Volunteer Agricultural District; and protect the riverine system	
Shaw Heights Detailed Land Use Plan 09/15/08	Pages 41-48	To provide an orderly guide for growth, development neighborhood rehabilitation, transformation, and to protect the public health, safety, and welfare.		The Plan recommends the the installation of public sewer in the Area, the preservation of open space and natural resources, and protection of the watershed area, and the provision of natural buffers along the streamways	
Mobility 2035 Long Range Transportation Plan 04/22/09		To provide detailed planning for the road network within Cumberland County in order to protect the public health, safety, and welfare.	HIGH	This Plan provides technical details and classifications for collector streets, minor and major thoroughfares within the Urban Planning Area.	
Cumberland County Emergency Operations Plan 12/07/06		To provide actions to reduce the vulnerability to a disaster and enhance the recovery from a disaster in order to protect the public health, safety, and welfare.	HIGH	This Plan provides actions to be taken to reduce the vulnerability of people and property to disaster, establishes an effective mechanism to respond in the event of a disaster and identifies critical facilities impacted during a disaster.	
Fayetteville/Cumberland County Parks & Recreation Master Plan 07/06/2006		To provide a long-range Master Plan necessary for guided recreation growth.	HIGH	This Plan provides recommendations for utilizing existing facilities, natural resources and open spaces in a manner that will protect environmentally sensitive areas, as well as provides a plan for acquisition of land for active and passive recreation facilities.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENES S	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
2000 International Building Code with N.C. Amendments		To provide specific construction standards to protect the public health, safety, and welfare.	HIGH	This Code provides specific standards for plumbing, building, mechanical and electrical construction.	
N.C. General Statutes 113A Article 4 Sedimentation Pollution Control Act		To protect existing natural resources and the public health, safety, and welfare.	HIGH	This Act provides a mechanism for sedimentation and erosion control including permitting and enforcement measures.	
Fayetteville Urban Area Thoroughfare Plan 6/95		To provide detailed planning for the road network within Cumberland County in order to protect the public health, safety, and welfare.	HIGH	This Plan provides technical details and classifications for collector streets, minor and major thoroughfares within the Urban Planning Area.	
Fayetteville Area Metropolitan Planning Organization		To provide comprehensive transportation planning for the Metropolitan Planning Area of Cumberland County in order to protect the public health, safety, and welfare.	HIGH	This Organization provides specific plans and technical support for all types of transportation planning, including road networks within the Metropolitan Planning Area.	
Mid-Carolina Rural Planning Organization		To provide comprehensive transportation planning within the rural portion of Cumberland County in order to protect the public health, safety, and welfare.	HIGH	This Organization provides specific plans and technical support for all types of transportation planning, including road networks within the Rural Planning Area.	

TITLE & ADOPTION DATE	DOCUMENT REFERENCE	PURPOSE & DESCRIPTION	MITIGATION EFFECTIVENESS	RATIONALE FOR EFFECTIVENESS	MITIGATION STRATEGY
Sandhills Area Land Trust (SALT)		A non-profit organization working to preserve the natural beauty and environment of the Sandhills Region. Cumberland County is one of 7 counties working with SALT.	HIGH	This Organization works with citizens, developers, municipalities and landowners to retain the Region's unique environmental features and positively influence growth and development.	
Cape Fear River Assembly		To provide the highest quality of life within the Cape Fear River Basin.	HIGH	This Organization provides scientific study, economic analysis and education in order to make decisions regarding the proper management of the Cape Fear River, its tributaries and adjacent land uses.	
Sustainable Sandhills		To provide regional sustainability planning that preserves natural resources, enhances economic development and improves the quality of life for present and future generations.	HIGH	This Initiative, comprised of members of communities in 6 counties bordering Fort Bragg and Camp Mackall and the Military, is working to provide a cooperative effort to provide a model for regional sustainability planning.	
Joint Compatible Land Use Study 2003		To provide policies and implementation measures to mitigate conflicts between urban development and Military operations on a Regional basis.	MODERATE	This Study provides compatibility measures and land use policy recommendations that have not been adopted.	Adopt the Land Use Study.

Overall, the local ordinances, policies and programs relevant to hazard mitigation are highly effective in terms of hazard mitigation). Several ordinances should be revised to provide stricter development standards and include specific recommendations outlined in Cumberland County 2030 Growth Vision Plan Policies, Actions, and Map, Cumberland County Land Use Policies Plan, Stedman Area Detailed Land Use Plan, Eastover Area Detailed Land Use Plan, North Fayetteville Study Area Detailed Land Use Plan, Spring Lake Area Detailed Land Use Plan, and the Wade Study Area Detailed Land Use Plan, Vision Northeast Plan, and the Shaw Heights Detailed Land Use Plan

Review of these existing plans, policies, ordinances and programs has resulted in specific actions to create new ordinances (or revise existing ordinances) that would serve to reduce the hazard vulnerability of the Unincorporated Area. Land use, transportation, utility, recreation and capital improvement plans are designed to provide orderly growth and development without endangering the public health, safety and welfare. Preparation, review and revisions of these types of plans are a continuous process. Goals, Actions and information contained within this Hazard Mitigation Plan will be reviewed and incorporated into the planning process. Additionally, the five-year review of the Hazard Mitigation Plan will include an examination of existing plans, policies, ordinances and programs as part of the Capability Assessment as well as Mitigation Strategies.

Legal Capability

Local governments in North Carolina have been authorized by the State legislature to carry out four broad governmental powers: Regulation, Acquisition, Taxation and Spending. The following is a summary of North Carolina enabling legislation granting these broad governmental powers relevant to hazard mitigation.

Regulation

General Police Power

Counties in North Carolina have been granted broad regulatory powers in their jurisdictions. North Carolina General Statutes [NCGS] bestow the general police power on counties, allowing them to enact and enforce ordinances, which define, prohibit, regulate or abate acts, omissions, or conditions detrimental to the health, safety and welfare of the people and to define and abate nuisances (including public health nuisances).

Hazard mitigation can be included under the police power to protect the public health, safety and welfare, therefore counties may include requirements for hazard mitigation in local ordinances. Counties may also use their power to abate nuisances, which could include by local definition, any activity or condition making people or property more vulnerable to any hazard [NCGS Chapter 153A, Article 6 Delegation and Exercise of the General Police Power to Counties].

Building Codes and Building Inspection

Counties can engage in risk reduction measures focusing on strengthening building codes and requiring retrofitting of existing structures and facilities to protect the public health, safety, and welfare in the event of a natural hazard.

North Carolina has a State mandatory building code, which applies throughout the State [NCGS 143-138 (c)]. However, local jurisdictions may adopt codes for their respective jurisdictions if approved by the State as providing “adequate minimum standards” [NCGS 1143-138 (e)]. Local regulations cannot be less restrictive than the State code. Exempted from the State code are public utility facilities other than buildings; liquefied petroleum gas and liquid fertilizer installations, and farm buildings outside municipal jurisdictions. No State permit may be required for structures under \$20,000. (Note that exemptions apply only to State, not local permits).

The State legislature has also empowered counties to carry out building inspections. NCGS Chapter 153A, Article 18, Part 4 empower counties to create an Inspections Department, and enumerates its duties and responsibilities, which include enforcing State and local laws relating to the construction of buildings, installation of plumbing, electrical, heating systems, etc; building maintenance; and other matters.

Land Use

Through various land use regulatory powers, granted by the State, local governments can control the amount, timing, density, and location of new development. These growth characteristics can determine the level of vulnerability of an area in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning, subdivision, floodplain, and stormwater and watershed ordinances.

Zoning

Zoning is the most basic tool available to control the use of land. The North Carolina General Statutes 153A-340 give broad enabling authority for counties to use zoning as a planning tool. Counties may also regulate inside a municipal jurisdiction at the request of a municipality, as set forth in NCGS 160A-360(d). The statutory purpose for the grant of power is to promote the health, safety or the general welfare of the community. Land “uses” controlled by zoning include the type of use, such as residential, commercial, industrial, as well as minimum specifications for use such as lot size, building height, setback, density, etc.

Counties are authorized to divide their territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair or use of buildings, structures, or land within those districts [NCGS 153A-340]. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text.

Comprehensive or Master Planning

Within North Carolina, local governments are required to create or designate a planning agency in order to exercise the regulatory powers related to land use [NCGS 160A-387; 153A-321]. The planning agency may: prepare studies for an area/neighborhood; determine objectives; prepare and adopt plans for achieving objectives; develop and recommend policies, ordinances and administrative means to implement plans; and perform other related duties [NCGS 160A-361; 153A- 321].

NCGS 153A- 341, requires that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted “in accordance with a plan,” the existence of a separate comprehensive planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community.

Subdivision Regulation

Subdivision regulations control the division of land into parcels for the purpose of building a development or sale. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street or a change in existing streets [NCGS 153A-335]. Flood-related subdivision controls typically require that developers install adequate drainage facilities and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding unless flood hazards are overcome through filing or other measures, and they prohibit filling of floodway areas. Subdivision regulations require that subdivision plans be approved prior to the division of land. Subdivision regulation is limited in its ability to directly affect how land is used or minimum specifications for structures.

Floodplain Regulation

The North Carolina legislature passed the “Act to Prevent Inappropriate Development in the One Hundred-Year Floodplain and to Reduce Flood Hazards” to regulate development within floodways [NCGS 143-214.51-214.61]. It serves as a risk reduction or risk elimination tool depending upon local

government use. The purpose of this law is to minimize the extent of floods by preventing obstructions that inhibit water flow and increase flood height and damage; prevent and minimize loss of life, injuries, property damage and other losses in flood hazard areas; and promote the public health, safety and welfare of citizens.

The statute directs, rather than mandates, local government to designate a one hundred-year floodplain; adopt local ordinances to regulate uses in flood hazard areas; enforce those ordinances; and grant permits for use in flood hazard areas that are consistent with the ordinance. The statute established minimum standards for local ordinances and provides for variances for prohibited uses such as:

- (a) A flood hazard prevention ordinance adopted by a county or city pursuant to this part shall, at a minimum:
 - 1. Meet the requirements for participation in the National Flood Insurance Program and of this section.
 - 2. Prohibit new solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities in the 100-year floodplain except as noted in section (b) below.
 - 3. Provide that a structure or tank for chemical or fuel storage incidental to a use that is allowed under this section or to the operation of a water treatment facility may be located in a 100-year floodplain only if the structure or tank is either elevated above base flood elevation or designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
- (b) A flood hazard prevention ordinance may include a procedure for granting variances for uses prohibited under G.S. 143-215.54.
- (c) A county or municipality shall notify the Secretary of Crime Control and Public Safety of its intention to grant a variance at least 30 days prior to granting the variance. A variance may be granted upon finding that all of the following apply:
 - (1) The use serves a critical need in the community.
 - (2) No feasible location exists for the location of the use outside the 100-year floodplain.
 - (3) The lowest floor of any structure is elevated above the base flood elevation or is designed to be watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.
 - (4) The use complies with all other applicable laws and regulations.

Also, the statute ensures that local ordinances meet the minimum requirements of participation in the National Flood Insurance Program (NFIP), which will afford residents the ability to purchase flood insurance through the NFIP. Additionally, communities with such ordinances will be afforded priority in the consideration of applications for loans and grants from the Clean Water Revolving Loan and Grant Fund.

Acquisition

County governments can eliminate the risk of hazards through their power to acquire property, either in fee or lesser interest such as an easement. This removes the property from the private marketplace, thereby eliminating or reducing the possibility of inappropriate development. North Carolina legislation empowers counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease or eminent domain [NCGS Chapter 153A Article 18].

Taxation

The power to levy taxes and special assessments has been delegated to counties by the North Carolina legislature [NCGS 153A Article 7]. This power allows local governments to set preferential tax rates for areas unsuitable for development, such as wetlands, thereby discouraging development in hazardous areas. Local governments may also levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending or otherwise building or improving beach erosion control, or flood and hurricane protection works within a designated area [NCGS 160A 238].

Spending

Counties have been granted power to make expenditures in the public interest by the North Carolina General Assembly. An annual budget and a Capital Improvement Plan (CIP) can include hazard mitigation efforts. A CIP serves as a schedule for providing county services over a specified period of time. Committing to a timetable for the extension of facilities and services, local governments can effectively steer future growth and development and mitigate the impacts of natural hazards. Cumberland County does prepare an annual budget, but does not have a CIP.

Fiscal Capability

The North Carolina General Assembly has empowered counties to make expenditures in the public interest [NCGS 153A 101]. The primary source for funding these expenditures comes from property taxes. These revenues generally finance critical services available and delivered on a daily basis. Examples of these services include: public utilities, solid waste management, emergency services, health and social services, and schools. Many local jurisdictions do not have available funds to support special projects such as hazard mitigation activities. These jurisdictions look to the following sources for hazard mitigation funding:

Government Funding

Federal and State funds are available to local governments for the development and implementation of hazard mitigation plans. These sources are listed below.

Federal Funding

Hazard Mitigation Grant Program (HMGP) - This program provides funding for hazard mitigation measures following a Presidential disaster declaration. Even though the Federal government supplies the majority of the funds for this program, the program is administered on the State level. HMGP funds can be used for projects such as acquisition or relocation, retrofitting, development of local mitigation standards and comprehensive mitigation plans, structural hazard control and the purchase of equipment to improve preparedness and response.

Pre Disaster Mitigation Program Grants (PDM) - Pre Disaster Mitigation Program provides funding to States and local jurisdictions for cost-effective hazard mitigation actions. FEMA provides PDM grants to States, that in turn, provide sub-grants to local governments for mitigation activities such as planning and the implementation of projects identified through the evaluation of natural and man-made hazards.

Flood Mitigation Assistance Programs - This program (FMAP) furnishes mitigation assistance to States, local jurisdictions and individuals to reduce or eliminate the long-term risk of flood damage to the built environment and real property. FMAP is available on an annual basis and eligibility is based upon a jurisdiction participating in the National Flood Insurance Program and developing a mitigation plan. These funds may be used for elevation and/or dry flood proofing of structures, acquisition of real property, relocation or demolition of structures, as well as other minor structural projects.

National Flood Insurance Program - Participation in this risk-sharing program requires jurisdictions to adopt and enforce floodplain management ordinances designed to reduce future losses.

Buy-Out Programs - Funding is available to buy back floodplains, relocate residents, and demolish structures in order to eliminate or reduce payouts for recurring flood damage.

Earthquake Hazard Reduction Grants - These funds are available to States having a moderate or high risk of seismic activity.

Community Development Block Grants - The Community Development Block Grant (CDBG) is designed to assist counties and municipalities in rehabilitating substandard dwelling units and to expand economic opportunities, primarily for low-to-moderate income families. Additionally, as a result of a Presidential declared disaster, CDBG funds may be used for long-term needs such as acquisition, reconstruction, and redevelopment of disaster-affected areas.

Small Business Administration (SBA) Pre-Disaster Mitigation Loan Program - The purpose of this program is to make low-interest, fixed-rate loans to eligible small businesses for the purpose of implementing mitigation measures to protect business property from damage that may be caused by future disasters. The program is a pilot program, which supports the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation Program.

State Funding

Uniform Relocation Act - Tenants who must relocate as a result of acquisition of their housing are entitled to Uniform Relocation Act relocation benefits, such as moving expenses, replacement housing rental payments, and relocation assistance advisory services, regardless of the owner's voluntary participation.

Ability to Pay - The North Carolina Department of Commerce has ranked the 100 counties in an economic tier system due to the Lee Quality Jobs and Business Expansion Act of 1966, which provides for a sliding scale of State tax credits for economic investment. This Act has become North Carolina's primary development tool in an effort to assist smaller rural counties become economically competitive. The most economically depressed counties are ranked in Tier 1 and the most economically prosperous are ranked in Tier 5. These rankings are evaluated annually based on (1) population growth, (2) unemployment rate, and (3) per capita income.

The tier ranking is widely used by the State as a measure of an individual county's ability to pay when applying for State and Federal grants. Cumberland County is ranked as a Tier 4 County.

Non-Government Funding

Another potential source of revenue for local mitigation efforts are the contribution of non-governmental organizations, such as churches, charities community relief funds, the American Red Cross, hospitals, for-profit businesses and non-profit organizations, such as nature conservancy and land trust organizations.

Technical Capability

State and Federal Technical Assistance

Agencies such as the Federal Emergency Management Agency (FEMA) and the North Carolina Division of Emergency Management (NCDEM) have made available numerous implementation manuals and other resource documents. These manuals provide information on mitigation techniques for various hazards, including hurricanes, floods, wildfires, tornadoes and earthquakes. Additionally, they provide technical information on engineering principles, construction methods, costs and suggestions for how techniques can be financed and implemented. Federal agencies such as the U.S. Army Corps of Engineers and Soil Conservation Service also provide similar services.

Statewide Floodplain Mapping Initiative

The State of North Carolina, through the Federal Emergency Management Agency's Cooperating Technical Community partnership initiative, has been designated as a Cooperating Technical State (CTS). As CTS, the State will assume primary ownership and responsibility for Flood Insurance Rate Maps (FIRM) for all North Carolina communities. This project will include conducting flood hazard analysis and producing updated digital FIRM (DFIRM).

The State has acquired raw elevation data for the six eastern river basins, Cape Fear, Lumber, Neuse, Pasquotank, Tar-Pamlico, and White Oak, which will be used to develop Digital Elevation Models (DEMs) update flood hazard data. Additionally, the updated flood hazard data will provide current, accurate information for local jurisdictions and property owners to make sound site planning and design decisions when building new structures and infrastructure and retrofitting existing structures.

Local Technical Assistance

Cumberland County has a geographic information system (GIS) that provides essential information and technology for hazard response and mitigation. The GIS system provides detailed data on property ownership, land use type and location, values of property and structures, location of the Special Flood Hazard Area and other infrastructure.

This system provides quick access and processing of detailed data that can be used to assist in deployment of resources, before, during and after a natural disaster, as well as assists in planning for the mitigation of future disasters.

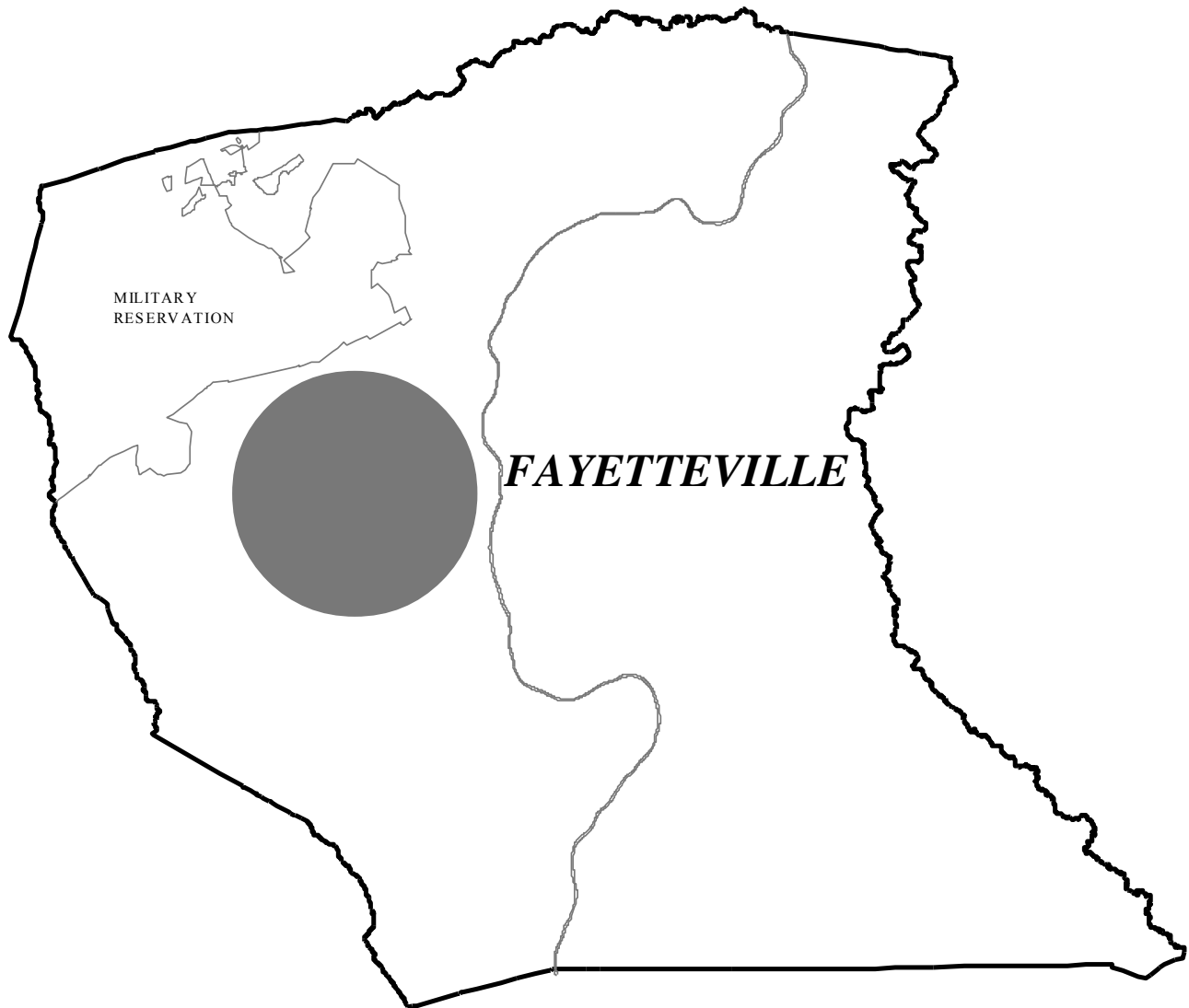
As previously mentioned in the section entitled Local Departments, Agencies and Organizations, Cumberland County and the municipalities therein, have responsive and highly trained staff who are capable of implementing mitigation strategies, as well as educating the public about potential hazards and the process necessary to mitigate these hazards.

Political Capability

The Cumberland County Board of Commissioners and the elected officials of each municipality are knowledgeable of the potential hazards faced by their respective jurisdictions, as well as past history of hazard events and recovery efforts. Additionally, the Cumberland County Joint Planning Board (serving Cumberland County and the Towns of Hope Mills, Eastover, Falcon, Godwin, Linden, Spring Lake, Stedman, and Wade) and the Fayetteville Planning Commission are also aware of the importance of hazard mitigation planning. Due to this knowledge and understanding, the current and future political climates are expected to be favorable for supporting hazard mitigation strategies.

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CITY OF FAYETTEVILLE HAZARD MITIGATION PLAN



FAYETTEVILLE HAZARD MITIGATION PLAN

COMMUNITY PROFILE

A comparison of Table 14 from the original plan and Table 14 from the update plan shows an interesting fact. While the total number of buildings in Fayetteville has increased significantly (from 47,243 to 68,910), the percentage of buildings in a flood hazard area has decreased (from 14.12 percent to 5.19 percent). It is likely that much of this decrease can be explained by a change the procedures used in GIS to select the parcels located within the defined flood area. In the original plan, a 250 foot buffer was delineated, while in the update study, no such 250 foot buffer was delineated.

For this Update to the 2006 Plan, the Planning staff used the boundaries of the City as of January 25, 2010. This included area annexed through Annex #513, which was effective on January 25, 2010. The staff estimates that the City contained a total of 147.76 square miles through Annex #513. However, for the purposes of this update, the staff did not include the area of the City within Fort Bragg. Without Fort Bragg, the City contains approximately 93.58 square miles. According to the North Carolina State Demographer, the July 1, 2009 certified estimate of population of the City was 207,788. This was the July 1, 2009 population of the City within boundaries of the City as of July 1, 2010. Without Fort Bragg, the City's population is approximately 182,866.

The City of Fayetteville is located in the central portion of Cumberland County on the banks of the Cape Fear River. Fayetteville is the center of trade and government in the County. The City has a council-manager form of government. A ten-member City Council governs the City. Nine of the City Council members are elected from districts, and the Mayor is elected at-large. The chief administrative officer responsible for carrying out Council action is the City Manager. The Fayetteville governmental structure consists of 13 departments and the Public Works Commission.

INTRODUCTION

The staff of the City of Fayetteville worked with staff from Cumberland County and other municipalities in preparing the 2006 Multi-Jurisdictional Hazard Mitigation Plan for Cumberland County and this five-year update. The purpose of this document is to summarize the City of Fayetteville Plan Update.

In order to prepare the Plan, staff members from the City, County, and other jurisdictions formed a staff-level Technical Committee. The members of the Technical Committee followed the steps and tasks set forth in a guidebook entitled, Keeping Natural Hazards from Becoming Disasters-A Mitigation Planning Guidebook for Local Governments prepared by the North Carolina Division of Environmental Management. This guidebook outlines nine steps for developing a hazard mitigation plan. These steps are: (1) hazard identification, (2) vulnerability assessment, (3) capability assessment, (4) formulate interim conclusions, (5) mitigation goals, (6) mitigation strategies and actions, (7) procedures for monitoring evaluating, reporting progress, and implementation, (8) procedures for revisions and updates, and (9) adoption.

IDENTIFYING AND PROFILING HAZARDS

For this update the Technical Committee reviewed **Table A1 – Hazard Identification and Analysis** and **Table A2 – Summary by Hazard Vulnerability by Jurisdiction**. The Technical Committee determined the following hazards could still affect the City of Fayetteville: flooding, hurricanes, tornadoes, drought, thunderstorms, severe winter storms, extreme heat, wildfires, and earthquakes. Although the Technical Committee concluded that flooding was not the most serious hazard that needed to be addressed in the

Plan, the Technical Committee focused on flooding problems. The Technical Committee noted that flooding problems are associated with and caused by other types of hazards, such as thunderstorms, hurricanes, and tornadoes.

Flooding problems in the City of Fayetteville (and in Cumberland County) used to be caused by flooding of the Cape Fear River. Major floods occurred in 1908, 1944, 1945, 1954, 1955, and 1972. When the Cape Fear River flooded, low-lying areas of the City were inundated. In 1974, the U.S. Corps of Engineers reduced the likelihood of floods on the Cape Fear River by constructing the B. Everett Jordan Dam and Lake. The U.S. Corps of Engineers built this dam and lake on the Haw River in the Cape Fear River basin, about 55 miles upstream from Fayetteville. Although the Jordan Dam and Lake serve multiple purposes, such as water supply, recreation, and flood-control, it is the flood-control purpose that is most important in Fayetteville. For example, it is estimated that this project provided an 8-foot reduction in the 100-year flood stage at the USGS gage along the Cape Fear River in Fayetteville. (FEMA, 1984, p. 5)

In addition to flooding from the Cape Fear River, the City of Fayetteville has also experienced creek flooding. Creek flooding has been caused primarily by heavy rainfall from local thunderstorms. Rainfall from local thunderstorms has been so heavy at times that earthen dams have failed. A recent example of this type of flooding occurred on September 15, 1989. This flood caused the most extensive flooding in the City since 1945. (Mason and Caldwell, 1992, p. 1) Additionally, Fayetteville has experienced eight hurricanes, 17 documented thunderstorms, 10 hailstorms, one drought, 12 winter storms, and one extreme heat event between 1950 and 2010 per NOAA history profile of Local Storm Events. These events were the same as presented in the overall County vulnerability section above. Wildfires, tornadoes, tsunamis, earthquakes and volcanoes have not been documented within Fayetteville. It is highly likely that thunderstorms and extreme heat events will occur in the future. Additionally, it is likely that Fayetteville will experience hurricanes, tornadoes, droughts, and severe winter storms. Flooding and earthquakes are possible, as well as wildfires, due to the recent annexation of a rural area. Additional information about these hazards is contained in **Table A1 - Hazard Identification and Analysis** and **Table A2 - Summary of Hazard Vulnerability by Jurisdiction**, and the Vulnerability Assessment Section of the overall County located in the Appendix A - Hazard Profile Section. Information within the hazard profile includes a location of the geographic area affected by each natural hazard, historical impact of each hazard, including previous occurrences and extent of impact relative to Fayetteville.

MITIGATION GOALS, STRATEGIES, AND ACTIONS

At a meeting held on December 10, 2003, the Technical Committee developed three draft goals for the Multi-Jurisdictional Hazard Mitigation Plan for Cumberland County. At this point in the goal-development process, the City staff assumed that the City would use the same goals developed for the multi-jurisdictional plan, unless comments were received at an upcoming public hearing for City residents. On December 16, 2003, the Fayetteville Planning Commission held a public hearing in order to give the public an opportunity to comment on hazard mitigation. No one spoke at this public hearing. Since no input was received at the December 16 public hearing, the staff did not propose any changes in the three draft goals. On January 20, 2004, the City Planning Staff presented the three draft goals to the Fayetteville Planning Commission. The Fayetteville Planning Commission did not suggest any changes in the draft goals.

The three goals developed for the Multi-Jurisdictional Hazard Mitigation Plan for Cumberland County are as follows:

GOAL #1

Reduce vulnerability of Cumberland County and its municipalities to all natural hazards for existing development, future development, redevelopment and infrastructure.

GOAL#2

Identify and protect all properties/natural resources that are at risk of damage due to a hazard and to undertake cost-effective mitigation measures to minimize losses.

GOAL#3

Improve public awareness, education and outreach programs for the natural hazards that Cumberland County and its municipalities are most likely to experience.

Mitigation Actions

This portion of the Plan outlines various mitigation strategies and actions that have been developed to reduce vulnerability in the City of Fayetteville. The actions will help implement the goals established for reducing vulnerability.

In its first task, the Technical Committee established the geographic planning areas as being the jurisdictional boundaries. The City of Fayetteville planning area included the jurisdictional boundary of the City. The City boundary has grown in the past five years but with one exception, boundary changes have been through minor annexations, primarily voluntary petitions to secure urban support for new development. These minor annexations are reflected in this Update. Fort Bragg has become part of the City but it separately conducts hazard mitigation planning and so is not included in this Update.

In the original plan, the Committee also defined the flood hazard area as a 250-foot distance from the existing 100-year flood boundary. This defined flood hazard area was recommended by FEMA for jurisdictions that presently utilizes Q-3 Flood Data. All jurisdictions in Cumberland County utilized the Q-3 Flood Data for developing the Cumberland County Multi-Jurisdiction Hazard Mitigation Plan. Vulnerability assessment data showed that 14.12 % of the buildings in the City of Fayetteville are in the flood hazard area. The staff then focused on developing actions to reduce the vulnerability of this area from the hazard of flooding. In this Update, a digital version of flood hazard areas is used, eliminating the need for the 250 foot buffer used with the previous 100-year flood boundaries.

The Planning staff developed mitigation “strategies” for the City of Fayetteville. “Strategies” refers to broad categories of actions that can be used to reduce vulnerability. This task involved considering which strategy or strategies were best suited to address the various hazards for Fayetteville. The State’s guidebook sets forth the following five categories of strategies: prevention, property protection, natural resource protection, structural projects, and public information.

The Planning staff then formulated selection criteria that were used in evaluating proposed actions. For example, every proposed action should be technically possible of solving the problem it was intended to solve, it should be cost effective, and it should be environmentally sound.

Lastly, the Planning staff formulated mitigation actions for the various hazards facing Fayetteville. Many of these actions pertain to flooding.

The proposed mitigation actions for the City of Fayetteville were as follows in the 2006 Plan. The status of implementation is noted in the last column of each of the tables associated with these actions:

1. The City should modify the City Flood Damage Prevention Ordinance to require that the lowest floor (including basement) be elevated to a level at least one foot above the base flood elevation, or to a more restrictive level.
2. The City should modify the City Zoning Ordinance to add a Conservation District (CD) Zone. (This is now in progress.) Once the District is established, it should apply the new CD Zone in the recently annexed areas and as cases arise. When the State delivers new flood maps, the City should apply the new CD Zone to all flood hazard areas.
3. When the State delivers new flood maps, the City should identify existing buildings that have their lowest floor below the 100-year base flood elevation. The City should then develop an acquisition/relocation program for these buildings.
4. The Stormwater Division of the City Engineering and Maintenance Department should expand the existing stream debris-cleaning program.
5. The City should maintain/improve existing City requirements that limit the amount of impervious surfaces and that encourage the use of pervious surfaces.
6. The City should make its Flood Damage Prevention Ordinance as similar as possible to the County Flood Damage Prevention Ordinance.
7. The City should investigate the possibility of participating in the Community Rating System (CRS) program.
8. In order to promote more evacuation routes, the City should consider amending the City subdivision ordinance to require additional access roads for developments located near potential hazard-prone areas.
9. The City should encourage electrical utilities other than PWC to expand their tree pruning programs. (The PWC tree-pruning program is adequate.)
10. The City should develop multilingual information brochures about hazards and distribute these brochures in neighborhoods with high concentrations of foreign-born populations.
11. The City should maintain the special GIS database developed for the City to be used to assess damages from future hazardous events that might occur and to update the City's Plan.
12. The City should ask the County Tax Department to develop a geographic identifier for individual buildings. This would allow GIS users to link tabular tax information about buildings to the individual buildings.
13. The City should consider options to reduce the risk of flooding for City-owned buildings that are located in flood hazard areas.

Each action is addressed in more detail on the following pages. For each action, information is provided on the following topics:

- Background
- Hazard that is targeted – *Hazard the action is targeted to mitigate.*